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<212> PRT

<213> Homo sapiens

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Asp Gln Val Phe Leu Asp Leu Gln Ser Leu Glu Lys His Met Leu Ser
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Gln His Lys His Ile His Ser Ser Val Lys Pro Phe Ile Ser Phe Ser
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Gln Ser Met Tyr Pro Phe Pro Asp Arg Asp Leu Arg Ser Leu Pro Leu
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Lys Met Glu Pro Gln Ser Pro Gly Glu Val Lys Lys Leu Gln Lys Gly
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Ser Ser Glu Ser Pro Phe Asp Leu Thr Thr Lys Arg Lys Asp Glu Lys
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Gln Asp Gln Pro Leu Asp Leu Ser Met Gly Ser Arg Ser Arg Ala Ser
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Lys Gly Ser Asn Val Glu Ser Arg Pro Ala Ser Asp Gly Ser Leu Gln
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His Ala Arg Pro Thr Pro Phe Phe Met Asp Pro Ile Tyr Arg Val Glu
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Lys Arg Lys Leu Thr Asp Pro Leu Glu Ala Leu Lys Glu Lys Tyr Leu
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Lys Gln Pro Leu His Arg Lys Ser Lys Ser Gln Ala Tyr Ala Met Met		
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Leu Ser Leu Ser Asp Lys Glu Ser Leu His Ser Thr Ser His Ser Ser		
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Ile Gln Ser Ile Ser His Val		720
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<210> 82

<211> 4923

<212> DNA

<213> Homo sapiens

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<400> 82

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<211> 1042

<212> PRT

<213> Homo sapiens

<400> 83

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Ser Ala Phe Ser Met Val Glu Glu Asp Phe Gln Gln Lys Leu Glu Ser
50     55     60
Glu Asn Asp Leu Gln Glu Ile His Thr Ile Gln Glu Cys Lys Glu Cys
65     70     75     80
Asp Gln Val Phe Pro Asp Leu Gln Ser Leu Glu Lys His Met Leu Ser
85     90     95
His Thr Glu Glu Arg Glu Tyr Lys Cys Asp Gln Cys Pro Lys Ala Phe
100    105    110
Asn Trp Lys Ser Asn Leu Ile Arg His Gln Met Ser His Asp Ser Gly
115    120    125
Lys His Tyr Glu Cys Glu Asn Cys Ala Lys Val Phe Thr Asp Pro Ser
130    135    140
Asn Leu Gln Arg His Ile Arg Ser Gln His Val Gly Ala Arg Ala His
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Ala Cys Pro Glu Cys Gly Lys Thr Phe Ala Thr Ser Ser Gly Leu Lys
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Gln His Lys His Ile His Ser Ser Val Lys Pro Phe Ile Cys Glu Val
180    185    190

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Cys	His	Lys	Ser	Tyr	Thr	Gln	Phe	Ser	Asn	Leu	Cys	Arg	His	Lys	Arg
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Met	Phe	Ser	Thr	Thr	Ser	Ser	Leu	Asn	Lys	His	Arg	Arg	Phe	Cys	Glu
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Gly	Lys	Asn	His	Phe	Ala	Ala	Gly	Gly	Phe	Phe	Gly	Gln	Gly	Ile	Ser
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Leu	Pro	Gly	Thr	Pro	Ala	Met	Asp	Lys	Thr	Ser	Met	Val	Asn	Met	Ser
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His	Ala	Asn	Pro	Gly	Leu	Ala	Asp	Tyr	Phe	Gly	Ala	Asn	Arg	His	Pro
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Ala	Gly	Leu	Thr	Phe	Pro	Thr	Ala	Pro	Gly	Phe	Ser	Phe	Ser	Phe	Pro
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Gly	Leu	Phe	Pro	Ser	Gly	Leu	Tyr	His	Arg	Pro	Pro	Leu	Ile	Pro	Ala
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Ser	Ser	Pro	Val	Lys	Gly	Leu	Ser	Ser	Thr	Glu	Gln	Thr	Asn	Lys	Ser
				325					330					335	
Gln	Ser	Pro	Leu	Met	Thr	His	Pro	Gln	Ile	Leu	Pro	Ala	Thr	Gln	Asp
			340					345					350		
Ile	Leu	Lys	Ala	Leu	Ser	Lys	His	Pro	Ser	Val	Gly	Asp	Asn	Lys	Pro
		355					360					365			
Val	Glu	Leu	Gln	Pro	Glu	Arg	Ser	Ser	Glu	Glu	Arg	Pro	Phe	Glu	Lys
	370					375					380				
Ile	Ser	Asp	Gln	Ser	Glu	Ser	Ser	Asp	Leu	Asp	Asp	Val	Ser	Thr	Pro
385					390					395					400
Ser	Gly	Ser	Asp	Leu	Glu	Thr	Thr	Ser	Gly	Ser	Asp	Leu	Glu	Ser	Asp
				405					410					415	
Ile	Glu	Ser	Asp	Lys	Glu	Lys	Phe	Lys	Glu	Asn	Gly	Lys	Met	Phe	Lys
			420					425					430		
Asp	Lys	Val	Ser	Pro	Leu	Gln	Asn	Leu	Ala	Ser	Ile	Asn	Asn	Lys	Lys
		435					440					445			
Glu	Tyr	Ser	Asn	His	Ser	Ile	Phe	Ser	Pro	Ser	Leu	Glu	Glu	Gln	Thr
	450					455					460				
Ala	Val	Ser	Gly	Ala	Val	Asn	Asp	Ser	Ile	Lys	Ala	Ile	Ala	Ser	Ile
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Ala	Glu	Lys	Tyr	Phe	Gly	Ser	Thr	Gly	Leu	Val	Gly	Leu	Gln	Asp	Lys
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Lys	Val	Gly	Ala	Leu	Pro	Tyr	Pro	Ser	Met	Phe	Pro	Leu	Pro	Phe	Phe
			500					505					510		
Pro	Ala	Phe	Ser	Gln	Ser	Met	Tyr	Pro	Phe	Pro	Asp	Arg	Asp	Leu	Arg
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Leu	Gln	Lys	Gly	Ser	Ser	Glu	Ser	Pro	Phe	Asp	Leu	Thr	Thr	Lys	Arg
545					550					555					560
Lys	Asp	Glu	Lys	Pro	Leu	Thr	Pro	Val	Pro	Ser	Lys	Pro	Pro	Val	Thr
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Pro	Ala	Thr	Ser	Gln	Asp	Gln	Pro	Leu	Asp	Leu	Ser	Met	Gly	Ser	Arg
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Gly	Ser	Leu	Gln	His	Ala	Arg	Pro	Thr	Pro	Phe	Phe	Met	Asp	Pro	Ile
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Tyr	Arg	Val	Glu	Lys	Arg	Lys	Leu	Thr	Asp	Pro	Leu	Glu	Ala	Leu	Lys
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 675 680 685
 Lys Pro Glu Ala Ser Glu Leu Gln Ser Val Pro Ser Met Phe Asn
 690 695 700
 Phe Arg Ala Pro Pro Asn Ala Leu Pro Glu Asn Leu Leu Arg Lys Gly
 705 710 715 720
 Lys Glu Arg Tyr Thr Cys Arg Tyr Cys Gly Lys Ile Phe Pro Arg Ser
 725 730 735
 Ala Asn Leu Thr Arg His Leu Arg Thr His Thr Gly Glu Gln Pro Tyr
 740 745 750
 Arg Cys Lys Tyr Cys Asp Arg Ser Phe Ser Ile Ser Ser Asn Leu Gln
 755 760 765
 Arg His Val Arg Asn Ile His Asn Lys Glu Lys Pro Phe Lys Cys His
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 Lys Lys His Glu Asn Gly Asn Met Ser Gly Thr Ala Thr Ser Ser Pro
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 His Ser Glu Leu Glu Ser Thr Gly Ala Ile Leu Asp Asp Lys Glu Asp
 820 825 830
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 Ser Gln Ser Pro Arg Asn Val Glu Glu Arg Met Asn Gly Ser His Phe
 850 855 860
 Lys Asp Glu Lys Ala Leu Val Thr Ser Gln Asn Ser Asp Leu Leu Asp
 865 870 875 880
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 885 890 895
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 965 970 975
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 980 985 990
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 995 1000 1005
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<210> 84

<211> 4039

<212> DNA

<213> Homo sapiens

<400> 84

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<210> 85

<211> 595

<212> PRT

<213> Homo sapiens

<400> 85

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Arg Leu Val Leu Asn Tyr Asp Pro Gly Asp Pro Lys Ala Phe Thr Glu
      35           40           45
Ile Asn Arg Leu Leu Pro Tyr Phe Arg Gln Ser Leu Ser Cys Cys Val
      50           55           60
Cys Gly His Leu Leu Gln Asp Pro Ile Ala Pro Thr Asn Ser Thr Cys
      65           70           75           80
Gln His Tyr Val Cys Lys Thr Cys Lys Gly Lys Lys Met Met Met Lys
      85           90           95
Pro Ser Cys Ser Trp Cys Lys Asp Tyr Glu Gln Phe Glu Glu Asn Lys
      100          105          110
Gln Leu Ser Ile Leu Val Asn Cys Tyr Lys Lys Leu Cys Glu Tyr Ile
      115          120          125
Thr Gln Thr Thr Leu Ala Arg Asp Ile Ile Glu Ala Val Asp Cys Ser
      130          135          140
Ser Asp Ile Leu Ala Leu Leu Asn Asp Gly Ser Leu Phe Cys Glu Glu
      145          150          155          160
Thr Glu Lys Pro Ser Asp Ser Ser Phe Thr Leu Cys Leu Thr His Ser
      165          170          175
Pro Leu Pro Ser Thr Ser Glu Pro Thr Thr Asp Pro Gln Ala Ser Leu
      180          185          190
Ser Pro Met Ser Glu Ser Thr Leu Ser Ile Ala Ile Gly Ser Ser Val
      195          200          205
Ile Asn Gly Leu Pro Thr Tyr Asn Gly Leu Ser Ile Asp Arg Phe Gly
      210          215          220
Ile Asn Ile Pro Ser Pro Glu His Ser Asn Thr Ile Asp Val Cys Asn
      225          230          235          240
Thr Val Asp Ile Lys Thr Glu Asp Leu Ser Asp Ser Leu Pro Pro Val
      245          250          255
Cys Asp Thr Val Ala Thr Asp Leu Cys Ser Thr Gly Ile Asp Ile Cys
      260          265          270
Ser Phe Ser Glu Asp Ile Lys Pro Gly Asp Ser Leu Leu Leu Ser Val
      275          280          285
Glu Glu Val Leu Arg Ser Leu Glu Thr Val Ser Asn Thr Glu Val Cys
      290          295          300
Cys Pro Asn Leu Gln Pro Asn Leu Glu Ala Thr Val Ser Asn Gly Pro
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Phe Leu Gln Leu Ser Ser Gln Ser Leu Ser His Asn Val Phe Met Ser

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<210> 86
<211> 1385
<212> DNA
<213> Homo sapiens
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103

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<210> 87

<211> 252

<212> PRT

<213> Homo sapiens

<400> 87

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Lys Ala Ser Asn Val Leu Glu Glu Ile Ala Lys Asp Lys Val Leu Lys
          35          40          45
Asp Phe Tyr Val His Thr Val Met Thr Cys Tyr Phe Ser Leu Phe Gly
          50          55          60
Ile Asp Asn Met Ala Pro Ser Pro Gly His Ile Leu Arg Val Tyr Gly
          65          70          75          80
Gly Val Leu Pro Trp Ser Val Ala Leu Asp Trp Leu Thr Glu Lys Pro
          85          90          95
Glu Leu Phe Gln Leu Ala Leu Lys Ala Phe Arg Tyr Thr Leu Lys Leu
          100          105          110
Met Ile Asp Lys Ala Ser Leu Gly Pro Ile Glu Asp Phe Arg Glu Leu
          115          120          125
Ile Lys Tyr Leu Glu Glu Tyr Glu Arg Asp Trp Tyr Ile Gly Leu Val
          130          135          140
Ser Asp Glu Lys Trp Lys Glu Ala Ile Leu Gln Glu Lys Pro Tyr Leu
          145          150          155          160
Phe Ser Leu Gly Tyr Asp Ser Asn Met Gly Ile Tyr Thr Gly Arg Val
          165          170          175
Leu Ser Leu Gln Glu Leu Leu Ile Gln Val Gly Lys Leu Asn Pro Glu
          180          185          190
Ala Val Arg Gly Gln Trp Ala Asn Leu Ser Trp Glu Leu Leu Tyr Ala
          195          200          205
Thr Asn Asp Asp Glu Glu Arg Tyr Ser Ile Gln Ala His Pro Leu Leu
          210          215          220
Leu Arg Asn Leu Thr Val Gln Ala Ala Glu Pro Leu Gly Tyr Pro
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<210> 88

<211> 4660

<212> DNA

<213> Homo sapiens

<400> 88

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<210> 89

<211> 538

<212> PRT

<213> Homo sapiens

<400> 89

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Gly Glu Gln Lys Gly Arg Asn Glu Glu Lys Glu Asp Leu Arg Gly Glu
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Thr Leu	Ser Asn Leu Cys Asp Pro Gln Leu Lys Pro Glu Glu Arg Glu				
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<211> 4793

<212> DNA

<213> Homo sapiens

<400> 90

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<210> 91

<211> 625

<212> PRT

<213> Homo sapiens

<400> 91

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<210> 93

<211> 301

<212> PRT

<213> Homo sapiens

<400> 93

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20     25     30
Gly Glu Glu Glu Arg Ala His Gln Ser Ile Leu Thr Gln Arg Val His
35     40     45
Trp Ala Glu Ala Leu Gln Lys Leu Asp Thr Ile Arg Thr Gly Leu Val
50     55     60
Gly Met Leu Thr His Leu Asp Asp Leu Gln Leu Ile Gln Lys Glu Gln
65     70     75     80
Glu Ile Phe Glu Arg Thr Glu Glu Ala Glu Gly Ile Leu Asp Pro Gln
85     90     95
Glu Ser Glu Met Leu Asn Phe Asn Glu Lys Cys Thr Arg Ser Pro Leu
100    105    110
Leu Thr Gln Leu Trp Ala Thr Ala Val Leu Gly Ser Leu Ser Gly Thr
115    120    125
Glu Asp Ile Arg Ile Asp Glu Arg Thr Val Ser Pro Phe Leu Gln Leu
130    135    140
Ser Asp Asp Arg Lys Thr Leu Thr Phe Ser Thr Lys Lys Ser Lys Ala
145    150    155    160
Cys Ala Asp Gly Pro Glu Arg Phe Asp His Trp Pro Asn Ala Leu Ala
165    170    175
Ala Thr Ser Phe Gln Asn Gly Leu His Ala Trp Met Val Asn Val Gln
180    185    190
Asn Ser Cys Ala Tyr Lys Val Gly Val Ala Ser Gly His Leu Pro Arg
195    200    205
Lys Gly Ser Gly Ser Asp Cys Arg Leu Gly His Asn Ala Phe Ser Trp
210    215    220
Val Phe Ser Arg Tyr Asp Gln Glu Phe Arg Phe Ser His Asn Gly Gln
225    230    235    240

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111

His	Glu	Pro	Leu	Gly	Leu	Leu	Arg	Gly	Pro	Ala	Gln	Leu	Gly	Val	Val
			245					250					255		
Leu	Asp	Leu	Gln	Val	Gln	Glu	Leu	Leu	Phe	Tyr	Glu	Pro	Ala	Ser	Gly
		260					265					270			
Ile	Val	Leu	Cys	Ala	His	His	Val	Ser	Phe	Pro	Gly	Pro	Leu	Phe	Pro
		275					280					285			
Val	Phe	Ala	Val	Ala	Asp	Gln	Thr	Ile	Ser	Ile	Val	Arg			
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<210> 94

<211> 2317

<212> DNA

<213> Homo sapiens

<400> 94

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<210> 95

<211> 626

<212> PRT

<213> Homo sapiens

<400> 95

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Leu Thr Cys Leu Cys Pro Gln Cys Leu Ser Val Glu Asp Ala Leu Gly
      35          40          45
Leu Gly Glu Pro Glu Gly Ser Gly Leu Pro Pro Gly Pro Val Leu Glu
      50          55          60
Ala Arg Tyr Val Ala Arg Leu Ser Ala Ala Ala Val Leu Tyr Leu Ser
      65          70          75          80
Asn Pro Glu Gly Thr Cys Glu Asp Ala Arg Ala Gly Leu Trp Ala Ser
      85          90          95
His Ala Asp His Leu Leu Ala Leu Leu Glu Ser Pro Lys Ala Leu Thr
      100          105          110
Pro Gly Leu Ser Trp Leu Leu Gln Arg Met Gln Ala Arg Ala Ala Gly
      115          120          125
Gln Thr Pro Lys Thr Ala Cys Val Asp Ile Pro Gln Leu Leu Glu Glu
      130          135          140
Ala Val Gly Ala Gly Ala Pro Gly Ser Ala Gly Gly Val Leu Ala Ala
      145          150          155          160
Leu Leu Asp His Val Arg Ser Gly Ser Cys Phe His Ala Leu Pro Ser
      165          170          175          180
Pro Gln Tyr Phe Val Asp Phe Val Phe Gln Gln His Ser Ser Glu Val
      180          185          190
Pro Met Thr Leu Ala Glu Leu Ser Ala Leu Met Gln Arg Leu Gly Val
      195          200          205
Gly Arg Glu Ala His Ser Asp His Ser His Arg His Arg Gly Ala Ser
      210          215          220
Ser Arg Asp Pro Val Pro Leu Ile Ser Ser Ser Asn Ser Ser Ser Val
      225          230          235          240
Trp Asp Thr Val Cys Leu Ser Ala Arg Asp Val Met Ala Ala Tyr Gly
      245          250          255
Leu Ser Glu Gln Ala Gly Val Thr Pro Glu Ala Trp Ala Gln Leu Ser
      260          265          270
Pro Ala Leu Leu Gln Gln Gln Leu Ser Gly Ala Tyr Thr Ser Gln Ser
      275          280          285
Arg Pro Pro Val Gln Asp Gln Leu Ser Gln Ser Glu Arg Tyr Leu Tyr
      290          295          300
Gly Ser Leu Ala Thr Leu Leu Ile Cys Leu Cys Ala Val Phe Gly Leu
      305          310          315          320
Leu Leu Leu Thr Cys Thr Gly Cys Arg Gly Val Ala His Tyr Ile Leu
      325          330          335
Gln Thr Phe Leu Ser Leu Ala Val Gly Ala Leu Thr Gly Asp Ala Val
      340          345          350
Leu His Leu Thr Pro Lys Val Leu Gly Leu His Thr His Ser Glu Glu
      355          360          365
Gly Leu Ser Pro Gln Pro Thr Trp Arg Leu Leu Ala Met Leu Ala Gly
      370          375          380
Leu Tyr Ala Phe Phe Leu Phe Glu Asn Leu Phe Asn Leu Leu Leu Pro
      385          390          395          400
Arg Asp Pro Glu Asp Leu Glu Asp Gly Pro Cys Gly His Ser Ser His
      405          410          415
Ser His Gly Gly His Ser His Gly Val Ser Leu Gln Leu Ala Pro Ser
      420          425          430

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113

Glu Leu Arg Gln Pro Lys Pro Pro His Glu Gly Ser Arg Ala Asp Leu
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 Val Ala Glu Glu Ser Pro Glu Leu Leu Asn Pro Glu Pro Arg Arg Leu
 450 455 460
 Ser Pro Glu Leu Arg Leu Leu Pro Tyr Met Ile Thr Leu Gly Asp Ala
 465 470 475 480
 Val His Asn Phe Ala Asp Gly Leu Ala Val Gly Ala Ala Phe Ala Ser
 485 490 495
 Ser Trp Lys Thr Gly Leu Ala Thr Ser Leu Ala Val Phe Cys His Glu
 500 505 510
 Leu Pro His Glu Leu Gly Asp Phe Ala Ala Leu Leu His Ala Gly Leu
 515 520 525
 Ser Val Arg Gln Ala Leu Leu Asn Leu Ala Ser Ala Leu Thr Ala
 530 535 540
 Phe Ala Gly Leu Thr Trp His Ser Arg Leu Glu Ser Ala Arg Arg Ala
 545 550 555 560
 Arg Pro Gly Ser Trp Gln Trp Pro Pro Ala Cys Ser Leu Arg Ser Thr
 565 570 575
 Leu Arg His Ala Pro Gly Asp Val Glu Ser Thr Gly Pro Ala Ala Pro
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 Gly Ser Ser Ser Cys Cys Thr Thr Trp Ala Cys Trp Ala Ala Gly Pro
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 Ser Cys Cys Cys Cys Pro Cys Thr Arg Met Thr Ser Pro Ser Asp Thr
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 Leu Pro
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<210> 96

<211> 2761

<212> DNA

<213> Homo sapiens

<400> 96

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<210> 97

<211> 422

<212> PRT

<213> Homo sapiens

<400> 97

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          20           25           30
Ala Gly Leu Cys Glu Gln Ala Arg Ser Cys Arg Phe Tyr Ser Gly Ser
          35           40           45
Ala Thr Leu Ser Lys Val Glu Gly Thr Asp Val Thr Gly Ile Glu Glu
          50           55           60
Val Val Ile Pro Lys Lys Lys Thr Trp Asp Lys Val Ala Val Leu Gln
          65           70           75           80
Ala Leu Ala Ser Thr Val Asn Arg Asp Thr Thr Ala Val Pro Tyr Val
          85           90           95
Phe Gln Asp Asp Pro Tyr Leu Met Pro Ala Ser Ser Leu Glu Ser Arg
          100          105          110
Ser Phe Leu Leu Ala Lys Lys Ser Gly Glu Asn Val Ala Lys Phe Ile
          115          120          125
Ile Asn Ser Tyr Pro Lys Tyr Phe Gln Lys Asp Ile Ala Glu Pro His
          130          135          140
Ile Pro Cys Leu Met Pro Glu Tyr Phe Glu Pro Gln Ile Lys Asp Ile
          145          150          155          160
Ser Glu Ala Ala Leu Lys Glu Arg Ile Glu Leu Arg Lys Val Lys Ala
          165          170          175
Ser Val Asp Met Phe Asp Gln Leu Leu Gln Ala Gly Thr Thr Val Ser
          180          185          190
Leu Glu Thr Thr Asn Ser Leu Leu Asp Leu Leu Cys Tyr Tyr Gly Asp
          195          200          205
Gln Glu Pro Ser Thr Asp Tyr His Phe Gln Gln Thr Gly Gln Ser Glu
          210          215          220

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115

Ala Leu Glu Glu Glu Asn Asp Glu Thr Ser Arg Arg Lys Ala Gly His
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 Gln Phe Gly Val Thr Trp Arg Ala Lys Asn Asn Ala Glu Arg Ile Phe
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 260 265 270
 Gly Met Val Lys His Arg Ala Tyr Glu Gln Ala Leu Asn Leu Tyr Thr
 275 280 285
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 Leu Ile Glu Ala Thr Val Cys Ala Ile Asn Glu Lys Phe Glu Glu Lys
 305 310 315 320
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<210> 98

<211> 2757

<212> DNA

<213> Homo sapiens

<400> 98

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116

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<210> 99

<211> 697

<212> PRT

<213> Homo sapiens

<400> 99

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          20          25          30
Ala Gly Leu Cys Glu Gln Ala Arg Ser Cys Arg Phe Tyr Ser Gly Ser
          35          40          45
Ala Thr Leu Ser Lys Val Glu Gly Thr Asp Val Thr Gly Ile Glu Glu
          50          55          60
Val Val Ile Pro Lys Lys Lys Thr Trp Asp Lys Val Ala Val Leu Gln
          65          70          75          80
Ala Leu Ala Ser Thr Val Asn Arg Asp Thr Thr Ala Val Pro Tyr Val
          85          90          95
Phe Gln Asp Asp Pro Tyr Leu Met Pro Ala Ser Ser Leu Glu Ser Arg
          100          105          110
Ser Phe Leu Leu Ala Lys Lys Ser Gly Glu Asn Val Ala Lys Phe Ile
          115          120          125
Ile Asn Ser Tyr Pro Lys Tyr Phe Gln Lys Asp Ile Ala Glu Pro His
          130          135          140
Ile Pro Cys Leu Met Pro Glu Tyr Phe Glu Pro Gln Ile Lys Asp Ile
          145          150          155          160
Ser Glu Ala Ala Leu Lys Glu Arg Ile Glu Leu Arg Lys Val Lys Ala
          165          170          175
Ser Val Asp Met Phe Asp Gln Leu Leu Gln Ala Gly Thr Thr Val Ser
          180          185          190
Leu Glu Thr Thr Asn Ser Leu Leu Asp Leu Leu Cys Tyr Tyr Gly Asp
          195          200          205
Gln Glu Pro Ser Thr Asp Tyr His Phe Gln Gln Thr Gly Gln Ser Glu
          210          215          220
Ala Leu Glu Glu Glu Asn Asp Glu Thr Ser Arg Arg Lys Ala Gly His

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225					230					235				240
Gln	Phe	Gly	Val	Thr	Trp	Arg	Ala	Lys	Asn	Asn	Ala	Glu	Arg	Ile
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Gly	Met	Val	Lys	His	Arg	Ala	Tyr	Glu	Gln	Ala	Leu	Asn	Leu	Thr
		275					280					285		
Glu	Leu	Leu	Asn	Asn	Arg	Leu	His	Ala	Asp	Val	Tyr	Thr	Phe	Ala
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Leu	Ile	Glu	Ala	Thr	Val	Cys	Ala	Ile	Asn	Glu	Lys	Phe	Glu	Lys
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Trp	Ser	Lys	Ile	Leu	Glu	Leu	Leu	Arg	His	Met	Val	Ala	Gln	Val
			325						330					335
Lys	Pro	Asn	Leu	Gln	Thr	Phe	Asn	Thr	Ile	Leu	Lys	Cys	Leu	Arg
		340						345					350	
Phe	His	Val	Phe	Ala	Arg	Ser	Pro	Ala	Leu	Gln	Val	Leu	Arg	Met
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Lys	Ala	Ile	Gly	Ile	Glu	Pro	Ser	Leu	Ala	Thr	Tyr	His	His	Ile
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Arg	Leu	Phe	Asp	Gln	Pro	Gly	Asp	Pro	Leu	Lys	Arg	Ser	Ser	Phe
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Ile	Tyr	Asp	Ile	Met	Asn	Glu	Leu	Met	Gly	Lys	Arg	Phe	Ser	Pro
			405						410					415
Asp	Pro	Asp	Asp	Asp	Lys	Phe	Phe	Gln	Ser	Ala	Met	Ser	Ile	Cys
		420						425					430	
Ser	Leu	Arg	Asp	Leu	Glu	Leu	Ala	Tyr	Gln	Val	His	Gly	Leu	Lys
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Thr	Gly	Asp	Asn	Trp	Lys	Phe	Ile	Gly	Pro	Asp	Gln	His	Arg	Asn
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Tyr	Tyr	Ser	Lys	Phe	Phe	Asp	Leu	Ile	Cys	Leu	Met	Glu	Gln	Ile
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Val	Thr	Leu	Lys	Trp	Tyr	Glu	Asp	Leu	Ile	Pro	Ser	Ala	Tyr	Phe
			485						490					495
His	Ser	Gln	Thr	Met	Ile	His	Leu	Leu	Gln	Ala	Leu	Asp	Val	Ala
		500						505					510	
Arg	Leu	Glu	Val	Ile	Pro	Lys	Ile	Trp	Lys	Asp	Ser	Lys	Glu	Tyr
		515				520						525		
His	Thr	Phe	Arg	Ser	Asp	Leu	Arg	Glu	Glu	Ile	Leu	Met	Leu	Met
	530					535				540				
Arg	Asp	Lys	His	Pro	Pro	Glu	Leu	Gln	Val	Ala	Phe	Ala	Asp	Cys
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Ala	Asp	Ile	Lys	Ser	Ala	Tyr	Glu	Ser	Gln	Pro	Ile	Arg	Gln	Thr
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		580						585					590	
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		595				600						605		
Lys	His	Asn	Lys	Ile	Pro	Arg	Ser	Glu	Leu	Leu	Asn	Glu	Leu	Met
	610					615					620			
Ser	Ala	Lys	Val	Ser	Asn	Ser	Pro	Ser	Gln	Ala	Ile	Glu	Val	Val
625				630					635					640
Leu	Ala	Ser	Ala	Phe	Ser	Leu	Pro	Ile	Cys	Glu	Gly	Leu	Thr	Gln
			645						650					655
Val	Met	Ser	Asp	Phe	Ala	Ile	Asn	Gln	Glu	Gln	Lys	Glu	Ala	Leu
		660						665					670	
Asn	Leu	Thr	Ala	Leu	Thr	Ser	Asp	Ser	Asp	Thr	Asp	Ser	Ser	Ser
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690

695

<210> 100
 <211> 1940
 <212> DNA
 <213> Homo sapiens

<400> 100

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<210> 101
 <211> 280
 <212> PRT
 <213> Homo sapiens

<400> 101

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  20             25             30
Gly Asp Asn Trp Lys Phe Ile Gly Pro Asp Gln His Arg Asn Phe Tyr
  35             40             45
Tyr Ser Lys Phe Phe Asp Leu Ile Cys Leu Met Glu Gln Ile Asp Val
  50             55             60
Thr Leu Lys Trp Tyr Glu Asp Leu Ile Pro Ser Ala Tyr Phe Pro His
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119

65		70		75		80									
Ser	Gln	Thr	Met	Ile	His	Leu	Leu	Gln	Ala	Leu	Asp	Val	Ala	Asn	Arg
			85						90					95	
Leu	Glu	Val	Ile	Pro	Lys	Ile	Trp	Lys	Asp	Ser	Lys	Glu	Tyr	Gly	His
		100						105					110		
Thr	Phe	Arg	Ser	Asp	Leu	Arg	Glu	Glu	Ile	Leu	Met	Leu	Met	Ala	Arg
		115					120					125			
Asp	Lys	His	Pro	Pro	Glu	Leu	Gln	Val	Ala	Phe	Ala	Asp	Cys	Ala	Ala
	130					135					140				
Asp	Ile	Lys	Ser	Ala	Tyr	Glu	Ser	Gln	Pro	Ile	Arg	Gln	Thr	Ala	Gln
145					150					155				160	
Asp	Trp	Pro	Ala	Thr	Ser	Leu	Asn	Cys	Ile	Ala	Ile	Leu	Phe	Leu	Arg
			165						170					175	
Ala	Gly	Arg	Thr	Gln	Glu	Ala	Trp	Lys	Met	Leu	Gly	Leu	Phe	Arg	Lys
		180						185					190		
His	Asn	Lys	Ile	Pro	Arg	Ser	Glu	Leu	Leu	Asn	Glu	Leu	Met	Asp	Ser
		195					200					205			
Ala	Lys	Val	Ser	Asn	Ser	Pro	Ser	Gln	Ala	Ile	Glu	Val	Val	Glu	Leu
	210					215					220				
Ala	Ser	Ala	Phe	Ser	Leu	Pro	Ile	Cys	Glu	Gly	Leu	Thr	Gln	Arg	Val
225					230					235				240	
Met	Ser	Asp	Phe	Ala	Ile	Asn	Gln	Glu	Gln	Lys	Glu	Ala	Leu	Ser	Asn
			245					250					255		
Leu	Thr	Ala	Leu	Thr	Ser	Asp	Ser	Asp	Thr	Asp	Ser	Ser	Ser	Asp	Ser
		260						265					270		
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<210> 102

<211> 1853

<212> DNA

<213> Homo sapiens

<400> 102

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120

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ccatttcctg aaagtttatt gatcaaagaa atgttgcctt ggggtgtgtt tttcaatcct 1800
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<210> 103

<211> 414

<212> PRT

<213> Homo sapiens

<400> 103

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Gln Ser Ala Leu Pro Ala Val Met Ala Gly Leu Gly Pro Cys Pro Trp
          20          25          30
Ala Glu Ser Leu Ser Pro Ile Gly Asp Met Lys Val Lys Gly Glu Ala
          35          40          45
Pro Ala Asn Ser Gly Ala Pro Ala Gly Ala Ala Gly Arg Ala Lys Gly
          50          55          60
Glu Ser Arg Ile Arg Arg Pro Met Asn Ala Phe Met Val Trp Ala Lys
65          70          75          80
Asp Glu Arg Lys Arg Leu Ala Gln Gln Asn Pro Asp Leu His Asn Ala
          85          90          95
Glu Leu Ser Lys Met Leu Gly Lys Ser Trp Lys Ala Leu Thr Leu Ala
          100          105          110
Glu Lys Arg Pro Phe Val Glu Glu Ala Glu Arg Leu Arg Val Gln His
          115          120          125
Met Gln Asp His Pro Asn Tyr Lys Tyr Arg Pro Arg Arg Arg Lys Gln
          130          135          140
Val Lys Arg Leu Lys Arg Val Glu Gly Gly Phe Leu His Gly Leu Ala
          145          150          155          160
Glu Pro Gln Ala Ala Ala Leu Gly Pro Glu Gly Gly Arg Val Ala Met
          165          170          175
Asp Gly Leu Gly Leu Gln Phe Pro Glu Gln Gly Phe Pro Ala Gly Pro
          180          185          190
Pro Leu Leu Pro Pro His Met Gly Gly His Tyr Arg Asp Cys Gln Ser
          195          200          205
Leu Gly Ala Pro Pro Leu Asp Gly Tyr Pro Leu Pro Thr Pro Asp Thr
          210          215          220
Ser Pro Leu Asp Gly Val Asp Pro Asp Pro Ala Phe Phe Ala Ala Pro
          225          230          235          240
Met Pro Gly Asp Cys Pro Ala Ala Gly Thr Tyr Ser Tyr Ala Gln Val
          245          250          255
Ser Asp Tyr Ala Gly Pro Pro Glu Pro Pro Ala Gly Pro Met His Pro
          260          265          270
Arg Leu Gly Pro Glu Pro Ala Gly Pro Ser Ile Pro Gly Leu Leu Ala
          275          280          285
Pro Pro Ser Ala Leu His Val Tyr Tyr Gly Ala Met Gly Ser Pro Gly
          290          295          300
Ala Gly Gly Gly Arg Gly Phe Gln Met Gln Pro Gln His Gln His Gln
          305          310          315          320
His Gln His Gln His His Pro Pro Gly Pro Gly Gln Pro Ser Pro Pro
          325          330          335
Pro Glu Ala Leu Pro Cys Arg Asp Gly Thr Asp Pro Ser Gln Pro Ala

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121

	340		345		350										
Glu	Leu	Leu	Gly	Glu	Val	Asp	Arg	Thr	Glu	Phe	Glu	Gln	Tyr	Leu	His
	355						360					365			
Phe	Val	Cys	Lys	Pro	Glu	Met	Gly	Leu	Pro	Tyr	Gln	Gly	His	Asp	Ser
	370						375					380			
Gly	Val	Asn	Leu	Pro	Asp	Ser	His	Gly	Ala	Ile	Ser	Ser	Val	Val	Ser
385					390					395					400
Asp	Ala	Ser	Ser	Ala	Val	Tyr	Tyr	Cys	Asn	Tyr	Pro	Asp	Val		
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<210> 104

<211> 2398

<212> DNA

<213> Homo sapiens

<400> 104

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<210> 105
 <211> 232
 <212> PRT
 <213> Homo sapiens

<400> 105
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 35 40 45
 Phe Ala Ala Ala Met Gly Val Pro Glu Ile Pro Gly Glu Lys Leu Val
 50 55 60
 Thr Glu Arg Asn Lys Lys Arg Leu Glu Lys Glu Lys His Glu Lys Gly
 65 70 75 80
 Ala Gln Lys Thr Asp Cys Gln Lys Asn Leu Gly Thr Val Gly Ala Val
 85 90 95
 Ala Leu Asp Cys Lys Gly Asn Val Ala Tyr Ala Thr Ser Thr Gly Gly
 100 105 110
 Ile Val Asn Lys Met Val Gly Arg Val Gly Asp Ser Pro Cys Leu Gly
 115 120 125
 Ala Gly Gly Tyr Ala Asp Asn Asp Ile Gly Ala Val Ser Thr Thr Gly
 130 135 140
 His Gly Glu Ser Ile Leu Lys Val Asn Leu Ala Arg Leu Thr Leu Phe
 145 150 155 160
 His Ile Glu Gln Gly Lys Thr Val Glu Glu Ala Ala Asp Leu Ser Leu
 165 170 175
 Gly Tyr Met Lys Ser Arg Val Lys Gly Leu Gly Gly Leu Ile Val Val
 180 185 190
 Ser Lys Thr Gly Asp Trp Val Ala Lys Trp Thr Ser Thr Ser Met Pro
 195 200 205
 Trp Ala Ala Ala Lys Asp Gly Lys Leu His Phe Gly Ile Asp Pro Asp
 210 215 220
 Asp Thr Thr Ile Thr Asp Leu Pro
 225 230

<210> 106
 <211> 1811
 <212> DNA
 <213> Homo sapiens

<400> 106
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<210> 107

<211> 282

<212> PRT

<213> Homo sapiens

<400> 107

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          20          25          30
Gly Arg His Ser Ile Thr Val Thr Val Ala Ser Ala Gly Asn Ile
          35          40          45
Gly Glu Asp Gly Ile Gln Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu
          50          55          60
Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val
          65          70          75          80
His Glu Phe Lys Glu Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met
          85          90          95
Phe Arg Gly Arg Thr Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn
          100          105          110
Ala Ser Leu Arg Leu Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr
          115          120          125
Lys Cys Tyr Ile Ile Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu
          130          135          140
Tyr Lys Thr Gly Ala Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn
          145          150          155          160
Ala Ser Ser Glu Thr Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln
          165          170          175
Pro Thr Val Val Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser
          180          185          190
Glu Val Ser Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met
          195          200          205
Lys Val Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser
          210          215          220
Cys Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val
          225          230          235          240
Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser
          245          250          255
Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp Ala Leu
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<210> 108
<211> 2611
<212> DNA
<213> Homo sapiens

<400> 108
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<210> 109
<211> 150
<212> PRT

125

<213> Homo sapiens

<400> 109

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      20           25           30
Asn Ala Asp Gly His Gly Glu Val Trp Thr Asp Trp Asn Asn Met Ser
      35           40           45
Lys Phe Phe Gln Tyr Gly Trp Arg Cys Thr Thr Asn Glu Asn Thr Tyr
      50           55           60
Ser Asn Arg Thr Leu Met Gly Asn Trp Asn Gln Glu Arg Tyr Asp Leu
65           70           75           80
Arg Asn Ile Val Gln Pro Lys Pro Leu Pro Ser Gln Phe Gly His Tyr
      85           90           95
Phe Glu Thr Thr Tyr Asp Thr Ser Tyr Asn Asn Lys Met Pro Leu Ser
      100          105          110
Thr His Arg Phe Lys Arg Glu Pro His Trp Phe Pro Gly His Gln Pro
      115          120          125
Glu Leu Asp Pro Pro Arg Tyr Lys Cys Thr Glu Lys Ser Thr Tyr Met
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Asn Ser Tyr Ser Lys Pro
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<210> 110

<211> 1032

<212> DNA

<213> Homo sapiens

<400> 110

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<210> 111

<211> 257

<212> PRT

<213> Homo sapiens

<400> 111

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126

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 35 40 45
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 50 55 60
 Cys Cys Ser Thr Asn Thr Ser Gln Glu Ala His Lys Asp Val Ser Tyr
 65 70 75 80
 Leu Tyr Arg Phe Asn Trp Asn His Cys Gly Glu Met Ala Pro Ala Cys
 85 90 95
 Lys Arg His Phe Ile Gln Asp Thr Cys Leu Tyr Glu Cys Ser Pro Asn
 100 105 110
 Leu Gly Pro Trp Ile Gln Gln Val Asp Gln Ser Trp Arg Lys Glu Arg
 115 120 125
 Val Leu Asn Val Pro Leu Cys Lys Glu Asp Cys Glu Gln Trp Trp Glu
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 Asp Cys Arg Thr Ser Tyr Thr Cys Lys Ser Asn Trp His Lys Gly Trp
 145 150 155 160
 Asn Trp Thr Ser Gly Phe Asn Lys Cys Ala Val Gly Ala Ala Cys Gln
 165 170 175
 Pro Phe His Phe Tyr Phe Pro Thr Pro Thr Val Leu Cys Asn Glu Ile
 180 185 190
 Trp Thr His Ser Tyr Lys Val Ser Asn Tyr Ser Arg Gly Ser Gly Arg
 195 200 205
 Cys Ile Gln Met Trp Phe Asp Pro Ala Gln Gly Asn Pro Asn Glu Glu
 210 215 220
 Val Ala Arg Phe Tyr Ala Ala Ala Met Ser Gly Ala Gly Pro Trp Ala
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<210> 112

<211> 1104

<212> DNA

<213> Homo sapiens

<400> 112

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1104

<210> 113

<211> 939

<212> DNA

<213> Homo sapiens

<400> 113

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<210> 114

<211> 1331

<212> DNA

<213> Homo sapiens

<400> 114

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<210> 115

<211> 929

<212> DNA

<213> Homo sapiens

<400> 115

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<210> 116

<211> 858

<212> DNA

<213> Homo sapiens

<400> 116

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<210> 117

<211> 243

<212> PRT

<213> Homo sapiens

<400> 117

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 1             5             10             15
Ala Gly Ser Ala Gln Pro Arg Ser Ala Arg Ala Arg Thr Asp Leu Leu
 20             25             30
Asn Val Cys Met Asn Ala Lys His His Lys Thr Gln Pro Ser Pro Glu
 35             40             45
Asp Glu Leu Tyr Gly Gln Cys Ser Pro Trp Lys Lys Asn Ala Cys Cys
 50             55             60
Thr Ala Ser Thr Ser Gln Glu Leu His Lys Asp Thr Ser Arg Leu Tyr
 65             70             75             80

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[illegible]

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<210> 118
<211> 1362
<212> DNA
<213> Homo sapiens
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<210> 119
<211> 453
<212> PRT
<213> Homo sapiens
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<400> 119

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His Ser His Val Pro Glu Phe Glu Val Ala Thr Trp Ile Lys Ile Thr
 20      25      30
Leu Ile Leu Val Tyr Leu Ile Ile Phe Val Met Gly Leu Leu Gly Asn
 35      40      45
Ser Ala Thr Ile Arg Val Thr Gln Val Leu Gln Lys Lys Gly Tyr Leu
 50      55      60
Gln Lys Glu Val Thr Asp His Met Val Ser Leu Ala Cys Ser Asp Ile
 65      70      75      80
Leu Val Phe Leu Ile Gly Met Pro Met Glu Phe Tyr Ser Ile Ile Trp
 85      90      95
Asn Pro Leu Thr Thr Ser Ser Tyr Thr Leu Ser Cys Lys Leu His Thr
100      105      110
Phe Leu Phe Glu Ala Cys Ser Tyr Ala Thr Leu Leu His Val Leu Thr
115      120      125
Leu Ser Phe Glu Arg Tyr Ile Ala Ile Cys His Pro Phe Arg Tyr Lys
130      135      140
Ala Val Ser Gly Pro Cys Gln Val Lys Leu Leu Ile Gly Phe Val Trp
145      150      155      160
Val Thr Ser Ala Leu Val Ala Leu Pro Leu Leu Phe Ala Met Gly Thr
165      170      175
Glu Tyr Pro Leu Val Asn Val Pro Ser His Arg Gly Leu Thr Cys Asn
180      185      190
Arg Ser Ser Thr Arg His His Glu Gln Pro Glu Thr Ser Asn Met Ser
195      200      205
Ile Cys Thr Asn Leu Ser Ser Arg Trp Thr Val Phe Gln Ser Ser Ile
210      215      220
Phe Gly Ala Phe Val Val Tyr Leu Val Val Leu Leu Ser Val Ala Phe
225      230      235      240
Met Cys Trp Asn Met Met Gln Val Leu Met Lys Ser Gln Lys Gly Ser
245      250      255
Leu Ala Gly Gly Thr Arg Pro Pro Gln Leu Arg Lys Ser Glu Ser Glu
260      265      270
Glu Ser Arg Thr Ala Arg Arg Gln Thr Ile Ile Phe Leu Arg Leu Ile
275      280      285
Val Val Thr Leu Ala Val Cys Trp Met Pro Asn Gln Ile Arg Arg Ile
290      295      300
Met Ala Ala Ala Lys Pro Lys His Asp Trp Thr Arg Ser Tyr Phe Arg
305      310      315      320
Ala Tyr Met Ile Leu Leu Pro Phe Ser Glu Thr Phe Phe Tyr Leu Ser
325      330      335
Ser Val Ile Asn Pro Leu Leu Tyr Thr Val Ser Ser Gln Gln Phe Arg
340      345      350
Arg Val Phe Val Gln Val Leu Cys Arg Leu Ser Leu Gln His Ala
355      360      365
Asn His Glu Lys Arg Leu Arg Val His Ala His Ser Thr Thr Asp Ser
370      375      380
Ala Arg Phe Val Gln Arg Pro Leu Leu Phe Ala Ser Arg Arg Gln Ser
385      390      395      400
Ser Ala Arg Arg Thr Glu Lys Ile Phe Leu Ser Thr Phe Gln Ser Glu
405      410      415
Ala Glu Pro Gln Ser Lys Ser Gln Ser Leu Ser Leu Glu Ser Leu Glu
420      425      430
Pro Asn Ser Gly Ala Lys Pro Ala Asn Ser Ala Ala Glu Asn Gly Phe
435      440      445

```

Gln Glu His Glu Val
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<210> 120
<211> 2870
<212> DNA
<213> Homo sapiens

<400> 120

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<210> 121
<211> 403
<212> PRT
<213> Homo sapiens
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<400>	121															
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			20					25					30			
Thr	Ser	Arg	Gly	Cys	Gly	Leu	Asp	Leu	Leu	Pro	Gln	Tyr	Val	Ser	Leu	
		35					40					45				
Cys	Asp	Leu	Asp	Ala	Ile	Trp	Gly	Ile	Val	Val	Glu	Ala	Val	Ala	Gly	
	50					55					60					
Ala	Gly	Ala	Leu	Ile	Thr	Leu	Leu	Leu	Met	Leu	Ile	Leu	Leu	Val	Arg	
65					70					75					80	
Leu	Pro	Phe	Ile	Lys	Glu	Lys	Glu	Lys	Lys	Ser	Pro	Val	Gly	Leu	His	
				85					90					95		
Phe	Leu	Phe	Leu	Leu	Gly	Thr	Leu	Gly	Leu	Phe	Gly	Leu	Thr	Phe	Ala	
			100					105					110			
Phe	Ile	Ile	Gln	Glu	Asp	Glu	Thr	Ile	Cys	Ser	Val	Arg	Arg	Phe	Leu	
		115					120					125				
Trp	Gly	Val	Leu	Phe	Ala	Leu	Cys	Phe	Ser	Cys	Leu	Leu	Ser	Gln	Ala	
	130					135					140					
Trp	Arg	Val	Arg	Arg	Leu	Val	Arg	His	Gly	Thr	Gly	Pro	Ala	Gly	Trp	
145					150					155					160	
Gln	Leu	Val	Gly	Leu	Ala	Leu	Cys	Leu	Met	Leu	Val	Gln	Val	Ile	Ile	
				165					170					175		
Ala	Val	Glu	Trp	Leu	Val	Leu	Thr	Val	Leu	Arg	Asp	Thr	Arg	Pro	Ala	
			180					185					190			
Cys	Ala	Tyr	Glu	Pro	Met	Asp	Phe	Val	Met	Ala	Leu	Ile	Tyr	Asp	Met	
		195					200					205				
Val	Leu	Leu	Val	Val	Thr	Leu	Gly	Leu	Ala	Leu	Phe	Thr	Leu	Cys	Gly	
		210				215					220					
Lys	Phe	Lys	Arg	Trp	Lys	Leu	Asn	Gly	Ala	Phe	Leu	Leu	Ile	Thr	Ala	
225					230					235					240	
Phe	Leu	Ser	Val	Leu	Ile	Trp	Val	Ala	Trp	Met	Thr	Met	Tyr	Leu	Phe	
				245					250					255		
Gly	Asn	Val	Lys	Leu	Gln	Gln	Gly	Asp	Ala	Trp	Asn	Asp	Pro	Thr	Leu	
			260					265					270			
Ala	Ile	Thr	Leu	Ala	Ala	Ser	Gly	Trp	Val	Phe	Val	Ile	Phe	His	Ala	
		275					280					285				
Ile	Pro	Glu	Ile	His	Cys	Thr	Leu	Leu	Pro	Ala	Leu	Gln	Glu	Asn	Thr	
		290				295					300					
Pro	Asn	Tyr	Phe	Asp	Thr	Ser	Gln	Pro	Arg	Met	Arg	Glu	Thr	Ala	Phe	
305					310					315					320	
Glu	Glu	Asp	Val	Gln	Leu	Pro	Arg	Ala	Tyr	Met	Glu	Asn	Lys	Ala	Phe	
				325					330					335		
Ser	Met	Asp	Glu	His	Asn	Ala	Ala	Leu	Arg	Thr	Ala	Gly	Phe	Pro	Asn	
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133

<210> 122
 <211> 1474
 <212> DNA
 <213> Homo sapiens

<400> 122
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 agtctcctca tatgtgcaag ctgggccctc ccctggaatc taaagcctcc tcagccttct 180
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 acggaacgca gcctgcacgc tccgatgtac ctctttctct gcattgcttc agccattgac 480
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 agcacatcag tacttttctc ttggtggaat agtaaaactaa agtatggtac atctacctaa 1380
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 aaaaccaaac atgcttataa cattaaaaaa aaaa 1474

<210> 123
 <211> 320
 <212> PRT
 <213> Homo sapiens

<400> 123
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 Pro Gly Leu Glu Lys Ala His Phe Trp Val Gly Phe Pro Leu Leu Ser
 20 25 30
 Met Tyr Val Val Ala Met Cys Gly Asn Cys Ile Val Val Phe Ile Val
 35 40 45
 Arg Thr Glu Arg Ser Leu His Ala Pro Met Tyr Leu Phe Leu Cys Met
 50 55 60
 Leu Ala Ala Ile Asp Leu Ala Leu Ser Thr Ser Thr Met Pro Lys Ile
 65 70 75 80
 Leu Ala Leu Phe Trp Phe Asp Ser Arg Glu Ile Ser Ile Glu Ala Cys
 85 90 95
 Leu Thr Gln Met Phe Phe Ile His Ala Leu Ser Ala Ile Glu Ser Thr
 100 105 110
 Ile Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys His Pro
 115 120 125
 Leu Arg His Ala Ala Val Leu Asn Asn Thr Val Thr Ala Gln Ile Gly

134

130	135	140
Ile Val Ala Val Val Arg Gly Ser Leu Phe Phe	Phe Pro Leu Pro Leu	
145	150	155
Leu Ile Lys Arg Leu Ala Phe Cys His Ser Asn	Val Leu Ser His Ser	160
	165	170
Tyr Cys Val His Gln Asp Val Met Lys Leu Ala	Tyr Ala Asp Thr Leu	175
	180	185
Pro Asn Val Val Tyr Gly Leu Thr Ala Ile Leu	Leu Val Met Gly Val	190
	195	200
Asp Val Met Phe Ile Ser Leu Ser Tyr Phe Leu	Ile Ile Arg Thr Val	205
	210	215
Leu Gln Leu Pro Ser Lys Ser Glu Arg Ala Lys	Ala Phe Gly Thr Cys	220
225	230	235
Val Ser His Ile Gly Val Val Leu Ala Phe Tyr	Val Pro Leu Ile Gly	240
	245	250
Leu Ser Val Val His Arg Phe Gly Asn Ser Leu	His Pro Ile Val Arg	255
	260	265
Val Val Met Gly Asp Ile Tyr Leu Leu Leu Pro	Pro Val Ile Asn Pro	270
	275	280
Ile Ile Tyr Gly Ala Lys Thr Lys Gln Ile Arg	Thr Arg Val Leu Ala	285
	290	295
Met Phe Lys Ile Ser Cys Asp Lys Asp Leu Gln	Ala Val Gly Gly Lys	300
305	310	315
		320

<210> 124

<211> 2205

<212> DNA

<213> Homo sapiens

<400> 124

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135

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<210> 125

<211> 532

<212> PRT

<213> Homo sapiens

<400> 125

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Met Glu Leu Asp Leu Ser Pro Pro His Leu Ser Ser Ser Pro Glu Asp
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Leu Trp Pro Ala Pro Gly Thr Pro Pro Gly Thr Pro Arg Pro Pro Asp
          20           25           30
Thr Pro Leu Pro Glu Glu Val Lys Arg Ser Gln Pro Leu Leu Ile Pro
          35           40           45
Thr Thr Gly Arg Lys Leu Arg Glu Glu Glu Arg Arg Ala Thr Ser Leu
          50           55           60
Pro Ser Ile Pro Asn Pro Phe Pro Glu Leu Cys Ser Pro Pro Ser Gln
          65           70           75           80
Ser Pro Ile Leu Gly Gly Pro Ser Ser Ala Arg Gly Leu Leu Pro Arg
          85           90           95
Asp Ala Ser Arg Pro His Val Val Lys Val Tyr Ser Glu Asp Gly Ala
          100          105          110
Cys Arg Ser Val Glu Val Ala Ala Gly Ala Thr Ala Arg His Val Cys
          115          120          125
Glu Met Leu Val Gln Arg Ala His Ala Leu Ser Asp Glu Thr Trp Gly
          130          135          140
Leu Val Glu Cys His Pro His Leu Ala Leu Glu Arg Gly Leu Glu Asp
          145          150          155          160
His Glu Ser Val Val Glu Val Gln Ala Ala Trp Pro Val Gly Gly Asp
          165          170          175
Ser Arg Phe Val Phe Arg Lys Asn Phe Ala Lys Tyr Glu Leu Phe Lys
          180          185          190
Ser Ser Pro His Ser Leu Phe Pro Glu Lys Met Val Ser Ser Cys Leu
          195          200          205
Asp Ala His Thr Gly Ile Ser His Glu Asp Leu Ile Gln Asn Phe Leu
          210          215          220
Asn Ala Gly Ser Phe Pro Glu Ile Gln Gly Phe Leu Gln Leu Arg Gly
          225          230          235          240
Ser Gly Arg Lys Leu Trp Lys Arg Phe Phe Cys Phe Leu Arg Arg Ser
          245          250          255
Gly Leu Tyr Tyr Ser Thr Lys Gly Thr Ser Lys Asp Pro Arg His Leu
          260          265          270
Gln Tyr Val Ala Asp Val Asn Glu Ser Asn Val Tyr Val Val Thr Gln
          275          280          285
Gly Arg Lys Leu Tyr Gly Met Pro Thr Asp Phe Gly Phe Cys Val Lys
          290          295          300
Pro Asn Lys Leu Arg Asn Gly His Lys Gly Leu Arg Ile Phe Cys Ser
          305          310          315          320
Glu Asp Glu Gln Ser Arg Thr Cys Trp Leu Ala Ala Phe Arg Leu Phe

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<210> 126
<211> 1619
<212> DNA
<213> Homo sapiens
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agttctgcgg	tgccagggag	tggagcagag	ctcagccccc	tcccaaacac	agatgggacc	60
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ggctggggcc	ggcccaggag	cttccccagg	gctcccaccg	tccatggcgg	tgcgggggga	180
gcccgcattc	ccctgtcctt	caccacgcgg	agctgcccac	ccoctggagg	gtcttggggg	240
tctggaagaa	gcagccccc	actaggcgga	aatgggaagg	ccaccatgca	gaatctcaac	300
gaccgccttg	cctcctacct	ggagaaggtt	cgcgccttgg	aggaggccaa	cattaagctg	360
gaaagccgca	tctgtaaatg	gcaccagcag	agagatcctg	gcagtaagaa	agattatttc	420
cagtatgagg	aaaacatcac	acacctgcag	gagcagatag	tggatggtaa	gatgaccaat	480
gctcagatta	ttcttctcat	tgacaatgcc	aggatggcag	tggatgactt	caacctcaag	540
tatgaaaatg	aacactcctt	taagaaagac	ttggaaattg	aagtcgaggg	cctccgaagg	600
accttagaca	acctgaccat	tgtcaccaaca	gacctagaac	aggaggtgga	aggaatgagg	660
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cagagcagac	aaggtgacat	ccacgaactg	aagcgcacat	tccaggccct	ggagattgac	960
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ataaccagg	agacatcaa	cgggaagatta	gttctttctg	aagtgaatga	aatccaaaag	1320
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137

tccttgacaca gacaccagtg agtgagttct aaaagataacc cttggaatta tcagactcag 1440
 aaactttttat tttttttttt ctgtaacagt ctcaccagac ttctcataat gctcttaata 1500
 tattgcactt ttctaataca agtgcgagtt tatgagggta aagctctact ttcctactgc 1560
 agccttcaga ttctcatcat ttgcatcta ttttgtagcc aataaaactc cgcactagc 1619

<210> 127

<211> 422

<212> PRT

<213> Homo sapiens

<400> 127

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Gly	Ala	Gly	Gly	Gly	Trp	Gly	Arg	Pro	Arg	Ser	Phe	Pro	Arg	Ala	Pro
			20					25					30		
Thr	Val	His	Gly	Gly	Ala	Gly	Gly	Ala	Arg	Ile	Ser	Leu	Ser	Phe	Thr
		35					40					45			
Thr	Arg	Ser	Cys	Pro	Pro	Pro	Gly	Gly	Ser	Trp	Gly	Ser	Gly	Arg	Ser
		50				55					60				
Ser	Pro	Leu	Leu	Gly	Gly	Asn	Gly	Lys	Ala	Thr	Met	Gln	Asn	Leu	Asn
65				70					75					80	
Asp	Arg	Leu	Ala	Ser	Tyr	Leu	Glu	Lys	Val	Arg	Ala	Leu	Glu	Glu	Ala
			85						90				95		
Asn	Met	Lys	Leu	Glu	Ser	Arg	Ile	Leu	Lys	Trp	His	Gln	Gln	Arg	Asp
			100					105					110		
Pro	Gly	Ser	Lys	Lys	Asp	Tyr	Ser	Gln	Tyr	Glu	Glu	Asn	Ile	Thr	His
			115					120				125			
Leu	Gln	Glu	Gln	Ile	Val	Asp	Gly	Lys	Met	Thr	Asn	Ala	Gln	Ile	Ile
			130			135					140				
Leu	Leu	Ile	Asp	Asn	Ala	Arg	Met	Ala	Val	Asp	Asp	Phe	Asn	Leu	Lys
145				150					155					160	
Tyr	Glu	Asn	Glu	His	Ser	Phe	Lys	Lys	Asp	Leu	Glu	Ile	Glu	Val	Glu
			165						170				175		
Gly	Leu	Arg	Arg	Thr	Leu	Asp	Asn	Leu	Thr	Ile	Val	Thr	Thr	Asp	Leu
			180					185					190		
Glu	Gln	Glu	Val	Glu	Gly	Met	Arg	Lys	Glu	Leu	Ile	Leu	Met	Lys	Glu
			195				200					205			
His	His	Glu	Gln	Glu	Met	Glu	Glu	His	His	Val	Pro	Ser	Asp	Phe	Asn
			210			215					220				
Val	Asn	Val	Lys	Val	Asp	Thr	Gly	Pro	Arg	Glu	Asp	Leu	Ile	Lys	Val
225				230					235					240	
Leu	Glu	Asp	Met	Arg	Gln	Glu	Tyr	Glu	Leu	Ile	Ile	Lys	Lys	Lys	His
			245						250				255		
Arg	Asp	Leu	Asp	Thr	Trp	Tyr	Lys	Glu	Gln	Ser	Ala	Ala	Met	Ser	Gln
			260					265					270		
Glu	Ala	Ala	Ser	Pro	Ala	Thr	Val	Gln	Ser	Arg	Gln	Gly	Asp	Ile	His
			275				280					285			
Glu	Leu	Lys	Arg	Thr	Phe	Gln	Ala	Leu	Glu	Ile	Asp	Leu	Gln	Ala	Gln
			290			295					300				
Tyr	Ser	Thr	Lys	Ser	Ala	Leu	Glu	Asn	Met	Leu	Ser	Glu	Thr	Gln	Ser
305				310					315					320	
Arg	Tyr	Ser	Cys	Lys	Leu	Gln	Asp	Met	Gln	Glu	Ile	Ile	Ser	His	Tyr
			325					330					335		
Glu	Glu	Glu	Leu	Thr	Gln	Leu	Arg	His	Glu	Leu	Glu	Arg	Gln	Asn	Asn
			340				345					350			
Glu	Tyr	Gln	Val	Leu	Leu	Gly	Ile	Lys	Thr	His	Leu	Glu	Lys	Glu	Ile
			355			360					365				
Thr	Thr	Tyr	Arg	Arg	Leu	Leu	Glu	Gly	Glu	Ser	Glu	Gly	Thr	Arg	Glu

138

370 375 380
 Glu Ser Lys Ser Ser Met Lys Val Ser Ala Thr Pro Lys Ile Lys Ala
 385 390 395 400
 Ile Thr Gln Glu Thr Ile Asn Gly Arg Leu Val Leu Cys Gln Val Asn
 405 410 415
 Glu Ile Gln Lys His Ala
 420

<210> 128
 <211> 1359
 <212> DNA
 <213> Homo sapiens

<400> 128
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 cactaaaacg tccctgccta caaatcatcc ggccaaatta tgagttcatt gtattatgcg 120
 aatgctttat tttctaaata tccagcctca agttcgggtt tcgctaccgg agccttccca 180
 gaacaaactt cttgtgcgtt tgcttccaac ccccgagcgc cgggctatgg agcgggttcg 240
 ggcgcttcct tcgccggctc gatgcagggc ttgtaccccg gcgggggggg catggcgggc 300
 cagagcgcgg ccggcgtcta cgcgccgggc tatgggctcg agccgagttc cttcaacatg 360
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 gcgggcgcca aggagcagag ggactcggac ttggcgggcg agagtaactt ccgatcttac 480
 ccctcgatgc gaagctcagg aactgaccgc aaacgaggcc gccagacctc caccgctac 540
 cagaccctgg agctggagaa ggaatttcac tacaatcgct acctgacgcg gcggcggcgc 600
 atcgagatcg cgcacgcgct ctgcctcacg gaaagacaga tcaagatttg gtttcagaac 660
 cggcgcatga agtggaaaaa ggagaacaag accgcgggccc cggggaccac cggccaagac 720
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 gaatagggaa gtaaaaaaac aaacaaaaaa acaaaaaaaa accctattta 900
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 gctattgtaa ggtctttgta aaatcttgca gttttgtaag ccctctttaa tgctgtcttt 1140
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 agcagcggca ccaaggggcc ttagggagcc ccaaaacctc ccactcgcgt gttccccaag 1260
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 tgtatctaaa ggatggaaaa ataaaacgca attaaaaat 1359

<210> 129
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 129
 Met Ser Ser Leu Tyr Tyr Ala Asn Ala Leu Phe Ser Lys Tyr Pro Ala
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 Ser Ser Ser Val Phe Ala Thr Gly Ala Phe Pro Glu Gln Thr Ser Cys
 20 25 30
 Ala Phe Ala Ser Asn Pro Gln Arg Pro Gly Tyr Gly Ala Gly Ser Gly
 35 40 45
 Ala Ser Phe Ala Gly Ser Met Gln Gly Leu Tyr Pro Gly Gly Gly Gly
 50 55 60
 Met Ala Gly Gln Ser Ala Ala Gly Val Tyr Ala Ala Gly Tyr Gly Leu
 65 70 75 80
 Glu Pro Ser Ser Phe Asn Met His Cys Ala Pro Phe Glu Gln Asn Leu
 85 90 95
 Ser Gly Val Cys Pro Gly Asp Ser Ala Lys Ala Ala Gly Ala Lys Glu

139

	100		105		110
Gln Arg Asp Ser Asp Leu Ala Ala Glu Ser Asn Phe Arg Ile Tyr Pro					
	115		120		125
Ser Met Arg Ser Ser Gly Thr Asp Arg Lys Arg Gly Arg Gln Thr Tyr					
	130		135		140
Thr Arg Tyr Gln Thr Leu Glu Leu Glu Lys Glu Phe His Tyr Asn Arg					
	145		150		155
Tyr Leu Thr Arg Arg Arg Arg Ile Glu Ile Ala His Ala Leu Cys Leu					
		165		170	175
Thr Glu Arg Gln Ile Lys Ile Trp Phe Gln Asn Arg Arg Met Lys Trp					
	180		185		190
Lys Lys Glu Asn Lys Thr Ala Gly Pro Gly Thr Thr Gly Gln Asp Arg					
	195		200		205
Ala Glu Ala Glu Glu Glu Glu Glu					
	210		215		

<210> 130
 <211> 1257
 <212> DNA
 <213> Homo sapiens

<400> 130
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 agccgggagc catgcgaccc cagggccccc cgcctcccc gcagcggctc cgcggcctcc 180
 tgctgctcct gctgctgcag ctgcccgcgc cgtcgagcgc ctctgagatc cccaagggga 240
 agcaaaaggc gcagctccgg cagagggagg tgggtggacct gtataatgga atgtgcttac 300
 aagggccagc aggagtgcct ggtcgagacg ggagccctgg ggccaatggc attccgggta 360
 cacctgggat ccaggtcgg gatggattca aaggagaaaa gggggaatgt ctgagggaaa 420
 gctttgagga gtcctggaca cccaactaca agcagtgttc atggagttca ttgaattatg 480
 gcatagatct tgggaaaatt gcggagtgtta catttacaaa gatgcgttca aatagtgttc 540
 taagagtttt gttcagtggc tcacttcggc taaaatgcag aaatgcattg tgtcagcgtt 600
 ggtatttcac attcaatgga gctgaatgtt caggacctct tcccattgaa gctataattt 660
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 tgggaaggact ttgtgaagga attggtgctg gatttagtga tgttgctatc tgggttgga 780
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 tgcccttgaa ttggttcactt aaatgacatt tttaataagt ttatgtatac atctgaatga 960
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 taaatgttaa gaattttttt tataatctgtt aaataaaaat tatttccaac aacctta 1257

<210> 131
 <211> 278
 <212> PRT
 <213> Homo sapiens

<400> 131
 Met Gln Pro Ala Ala Ala Ser Glu Arg Gly Gly Ala Asp Ala Asp His
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 Val Pro Leu Leu Gly Leu Leu Arg Leu Gln Leu Arg Ala Ala Arg Gln
 20 25 30
 Pro Gly Ala Met Arg Pro Gln Gly Pro Ala Ala Ser Pro Gln Arg Leu
 35 40 45
 Arg Gly Leu Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser

140

50	55	60
Ala Ser Glu Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg		
65	70	75
Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala Gly		80
	85	90
Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asn Gly Ile Pro Gly Thr		95
	100	105
Pro Gly Ile Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys Gly Glu Cys		110
	115	120
Leu Arg Glu Ser Phe Glu Glu Ser Trp Thr Pro Asn Tyr Lys Gln Cys		125
	130	135
Ser Trp Ser Ser Leu Asn Tyr Gly Ile Asp Leu Gly Lys Ile Ala Glu		140
145	150	155
Cys Thr Phe Thr Lys Met Arg Ser Asn Ser Ala Leu Arg Val Leu Phe		160
	165	170
Ser Gly Ser Leu Arg Leu Lys Cys Arg Asn Ala Cys Cys Gln Arg Trp		175
	180	185
Tyr Phe Thr Phe Asn Gly Ala Glu Cys Ser Gly Pro Leu Pro Ile Glu		190
	195	200
Ala Ile Ile Tyr Leu Asp Gln Gly Ser Pro Glu Met Asn Ser Thr Ile		205
	210	215
Asn Ile His Arg Thr Ser Ser Val Glu Gly Leu Cys Glu Gly Ile Gly		220
225	230	235
Ala Gly Leu Val Asp Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr		240
	245	250
Pro Lys Gly Asp Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile		255
	260	265
Ile Glu Glu Leu Pro Lys		270
275		

<210> 132

<211> 1177

<212> DNA

<213> Homo sapiens

<400> 132

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ttctgtttaa	accaaattgg	cagtcgtgtc	ttacacacac	cctgggtctt	catatgtggc	180
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cctggggcca	atggcattcc	gggtacacct	gggatcccag	gtcgggatgg	attcaaagga	300
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cctcttccca	ttgaagctat	aatttatttg	gaccaaggaa	gccctgaaat	gaattcaaca	600
attaatatcc	atcgcacttc	ttctgtggaa	ggactttgtg	aaggaattgg	tgctggatta	660
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ggatggaatt	cagtttctcg	catcattatt	gaagaactac	caaaataaat	gctttaattt	780
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taagtttatg	tatacatctg	aatgaaaagc	aaagctaaat	atgtttacag	accaaagtgt	900
gatttcacac	tgttttttaa	tctagcatta	ttcattttgc	ttcaatcaaa	agtggtttca	960
atattttttt	tagttgggtt	gaatactttc	ttcatagtca	cattctctca	acctataatt	1020
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aagctaccaa	tctttgtaca	attttgtaaa	gttaagaatt	ttttttatat	ctgttaaata	1140
aaaattattt	ccaacaaccw	waaaaaaaaa	aaaaagg			1177

. 141

<210> 133
 <211> 210
 <212> PRT
 <213> Homo sapiens

<400> 133
 Met Gly Ser Leu Ser Leu His Thr Pro Trp Val Phe Ile Cys Gly Arg
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 Gln Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala Gly Val Pro Gly Arg
 20 25 30
 Asp Gly Ser Pro Gly Ala Asn Gly Ile Pro Gly Thr Pro Gly Ile Pro
 35 40 45
 Gly Arg Asp Gly Phe Lys Gly Glu Lys Gly Glu Cys Leu Arg Glu Ser
 50 55 60
 Phe Glu Glu Ser Trp Thr Pro Asn Tyr Lys Gln Cys Ser Trp Ser Ser
 65 70 75 80
 Leu Asn Tyr Gly Ile Asp Leu Gly Lys Ile Ala Glu Cys Thr Phe Thr
 85 90 95
 Lys Met Arg Ser Asn Ser Ala Leu Arg Val Leu Phe Ser Gly Ser Leu
 100 105 110
 Arg Leu Lys Cys Arg Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr Phe
 115 120 125
 Asn Gly Ala Glu Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile Tyr
 130 135 140
 Leu Asp Gln Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg
 145 150 155 160
 Thr Ser Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu Val
 165 170 175
 Asp Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr Pro Lys Gly Asp
 180 185 190
 Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Ile Glu Glu Leu
 195 200 205
 Pro Lys
 210

<210> 134
 <211> 1340
 <212> DNA
 <213> Homo sapiens

<400> 134
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 agggagagag gcgcgcgggt gaaaggcgca ttgatgcagc ctgcggcggc ctcgagagcg 120
 ggccggagcca gacgtgacc acgttcctct cctcgggtctc ctccgcctcc agctccgcgc 180
 tgcccggcag ccgggagcca tgcgacccca gggcccccgc gcctccccgc agcggctccg 240
 cggcctcctg ctgctcctgc tgctgcagct gcccgcgccg tcgagcgccct ctgagatccc 300
 caaggggaag caaaaggcgc agctccggca gagggagggt gtggacctgt ataatggaat 360
 gtgcttacaa gggccagcag gagtgcctgg tcgagacggg agccctgggg ccaatggcat 420
 tccgggtaca cctgggatcc caggctcgga tggattcaaa ggagaaaagg gggaaatgtct 480
 gagggaaagc tttgaggagt cctggacacc caactacaag cagtgttcat ggagttcatt 540
 gaattatggc atagatcttg ggaatttg gtagtgatac tttacaaaga tgcgttcaaa 600
 tagtgctcta agagttttgt tcagtggctc acttcggcta aaatgcagaa atgcatgctg 660
 tcagcgttgg tatttcacat tcaatggagc tgaatgttca ggacctcttc ccattgaagc 720
 tataatttat ttggaccaag gaagccctga aatgaattca acaattaata ttcacgcac 780
 ttcttctgtg gaaggacttt gtgaaggaaat tgggtgctga ttagtgatg ttgctatctg 840
 ggttggcact tggtcagatt acccaaaagg agatgcttct actggatgga attcagtttc 900
 tcgcatcatt attgaagaac taccaaaata aatgctttta ttttcatttg ctacctcttt 960

142

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ttttattatg ccttggaatg gttcacttaa atgacatttt aaataagttt atgtatacat 1020
ctgaatgaaa agcaaagcta aatatgttta cagaccaaag tgtgatttca cactgttttt 1080
aaatctagca ttattcattt tgcttcaatc aaaagtgggt tcaatatattt ttttagttgg 1140
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cttttgtttt ttctcttagt atagcatttt taaaaaaata taaaagctac caatctttgt 1260
acaatttgta aatgttaaga atttttttta tatctgttaa ataaaaatta tttccaacaa 1320
ccwwaaaaaa aaaaaaaagg                                     1340

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<210> 135

<211> 243

<212> PRT

<213> Homo sapiens

<400> 135

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Leu Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser Ala Ser Glu
 20          25          30
Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg Glu Val Val
 35          40          45
Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala Gly Val Pro Gly
 50          55          60
Arg Asp Gly Ser Pro Gly Ala Asn Gly Ile Pro Gly Thr Pro Gly Ile
 65          70          75          80
Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys Gly Glu Cys Leu Arg Glu
 85          90          95
Ser Phe Glu Glu Ser Trp Thr Pro Asn Tyr Lys Gln Cys Ser Trp Ser
100          105          110
Ser Leu Asn Tyr Gly Ile Asp Leu Gly Lys Ile Ala Glu Cys Thr Phe
115          120          125
Thr Lys Met Arg Ser Asn Ser Ala Leu Arg Val Leu Phe Ser Gly Ser
130          135          140
Leu Arg Leu Lys Cys Arg Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr
145          150          155          160
Phe Asn Gly Ala Glu Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile
165          170          175
Tyr Leu Asp Gln Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His
180          185          190
Arg Thr Ser Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu
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<210> 136

<211> 5519

<212> DNA

<213> Homo sapiens

<400> 136

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<211> 765

<212> PRT

<213> Homo sapiens

<400> 137

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 35          40          45
Lys Thr Lys Leu Asp Thr Leu Ala Thr Gly His Leu Phe Gln Glu Val
 50          55          60
Arg Cys Met Lys Leu Val Gln His Pro Asn Ile Val Arg Leu Tyr Glu
 65          70          75          80
Val Ile Asp Thr Gln Thr Lys Leu Tyr Leu Ile Leu Glu Leu Gly Asp
 85          90          95
Glu Gly Asp Met Phe Asp Tyr Ile Met Lys His Glu Glu Gly Leu Asn
100          105          110
Glu Asp Leu Pro Lys Lys Tyr Phe Ala Gln Ile Val His Ala Ile Ser
115          120          125
Tyr Cys His Lys Leu His Val Val His Arg Asp Leu Lys Pro Glu Asn
130          135          140
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145          150          155          160
Phe Ser Asn Lys Phe Gln Pro Gly Lys Lys Leu Thr Thr Ser Cys Gly

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146

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<210> 138

<211> 2029

<212> DNA

<213> Homo sapiens

<400> 138

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147

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2029

<210> 139

<211> 379

<212> PRT

<213> Homo sapiens

<400> 139

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Gln	Arg	Leu	Val	Phe	Asn	Arg	Pro	Phe	Leu	Met	Phe	Ile	Val	Asp	Asn	355	360	365	
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148

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 <211> 2058
 <212> DNA
 <213> Homo sapiens

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<210> 141
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 <212> PRT
 <213> Homo sapiens

<400> 141
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 Ile Asp Tyr Asn Met Ile Val Ala Phe Met Leu Gly Asn Tyr Ile Asn
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 Leu Arg Glu Ser Ser Thr Glu Pro Asn Asp Ser Leu Trp Phe Ser Leu
 35 40 45
 Gln Lys Lys Asn Asp Thr Glu Ile Glu Thr Leu Leu Leu Asn Thr
 50 55 60
 Ala Pro Lys Ile Ile Asp Glu Gln Leu Val Cys Arg Leu Ser Lys Thr
 65 70 75 80

149

Asp Ile Phe Ile Ile Cys Arg Asp Asn Lys Ile Tyr Leu Asp Lys Met
 85 90 95
 Ile Thr Arg Asn Leu Lys Leu Arg Phe Tyr Gly His Arg Gln Tyr Leu
 100 105 110
 Glu Cys Glu Val Phe Arg Val Glu Gly Ile Lys Asp Asn Leu Asp Asp
 115 120 125
 Ile Lys Arg Ile Ile Lys Ala Arg Glu His Arg Asn Arg Leu Leu Ala
 130 135 140
 Asp Ile Arg Asp Tyr Arg Pro Tyr Ala Asp Leu Val Ser Glu Ile Arg
 145 150 155 160
 Ile Leu Leu Val Gly Pro Val Gly Ser Gly Lys Ser Ser Phe Phe Asn
 165 170 175
 Ser Val Lys Ser Ile Phe His Gly His Val Thr Gly Gln Ala Val Val
 180 185 190
 Gly Ser Asp Thr Thr Ser Ile Thr Glu Arg Tyr Arg Ile Tyr Ser Val
 195 200 205
 Lys Asp Gly Lys Asn Gly Lys Ser Leu Pro Phe Met Leu Cys Asp Thr
 210 215 220
 Met Gly Leu Asp Gly Ala Glu Gly Ala Gly Leu Cys Met Asp Asp Ile
 225 230 235 240
 Pro His Ile Leu Lys Gly Cys Met Pro Asp Arg Tyr Gln Phe Asn Ser
 245 250 255
 Arg Lys Pro Ile Thr Pro Glu His Ser Thr Phe Ile Thr Ser Pro Ser
 260 265 270
 Leu Lys Asp Arg Ile His Cys Val Ala Tyr Val Leu Asp Ile Asn Ser
 275 280 285
 Ile Asp Asn Leu Tyr Ser Lys Met Leu Ala Lys Val Lys Gln Val His
 290 295 300
 Lys Glu Val Leu Asn Cys Gly Ile Ala Tyr Val Ala Leu Leu Thr Lys
 305 310 315 320
 Val Asp Asp Cys Ser Glu Val Leu Gln Asp Asn Phe Leu Asn Met Ser
 325 330 335
 Arg Ser Met Thr Ser Gln Ser Arg Val Met Asn Val His Lys Met Leu
 340 345 350
 Gly Ile Pro Ile Ser Asn Ile Leu Met Val Gly Asn Tyr Ala Ser Asp
 355 360 365
 Leu Glu Leu Asp Pro Met Lys Asp Ile Leu Ile Leu Ser Ala Leu Arg
 370 375 380
 Gln Met Leu Arg Ala Ala Asp Asp Phe Leu Glu Asp Leu Pro Leu Glu
 385 390 395 400
 Glu Thr Gly Ala Ile Glu Arg Ala Leu Gln Pro Cys Ile
 405 410

<210> 142

<211> 1032

<212> DNA

<213> Homo sapiens

<400> 142

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 gctggacgtc cccacggcgg cgggtgcaggc gtccctcttg caagcgtag acttctttgg 180
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 cagctcgggtg ccctacggaa acgcacagga acaaaatgtc agtggcaggt gggagttcaa 420
 gtgccagctt ggagaagagg agtgcaaatt caacaagggtg gaggcctgcg tgttggatga 480

150

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acttgacatg gagctagcct tcctgaccat gtctggcatg gcatggaaga gtttgaggac 540
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tcatggagtg tgcaatgggg gaccgcggca tgcagctcat gcacgccaac gccagcggga 660
cagatgctct ccagccaccg caccgagtatg tgccctgggt caccgtcaat gggaaaccct 720
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tacacaaaat tccacccta gatcaagaat cctgctccac taagaatggt gctaaagtaa 1020
aactagttta at 1032

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<210> 143

<211> 303

<212> PRT

<213> Homo sapiens

<400> 143

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Met Asp Ser Arg His Thr Phe Ala Pro Ala Ala Met Thr Leu Ser Pro
1          5          10          15
Leu Leu Leu Phe Leu Pro Pro Leu Leu Leu Leu Leu Asp Val Pro Thr
20          25          30
Ala Ala Val Gln Ala Ser Pro Leu Gln Ala Leu Asp Phe Phe Gly Asn
35          40          45
Gly Pro Pro Val Asn Tyr Lys Thr Gly Asn Leu Tyr Leu Arg Gly Pro
50          55          60
Leu Lys Lys Ser Asn Ala Pro Leu Val Asn Val Thr Leu Tyr Tyr Glu
65          70          75          80
Ala Leu Cys Gly Gly Cys Arg Ala Phe Leu Ile Arg Glu Leu Phe Pro
85          90          95
Thr Trp Leu Leu Val Met Glu Ile Leu Asn Val Thr Ser Val Pro Tyr
100         105         110
Gly Asn Ala Gln Glu Gln Asn Val Ser Gly Arg Trp Glu Phe Lys Cys
115         120         125
Gln Leu Gly Glu Glu Glu Cys Lys Phe Asn Lys Val Glu Ala Cys Val
130         135         140
Leu Asp Glu Leu Asp Met Glu Leu Ala Phe Leu Thr Met Ser Gly Met
145         150         155         160
Ala Trp Lys Ser Leu Arg Thr Trp Arg Glu Val Cys His Tyr Ala Cys
165         170         175
Ser Ser Thr Pro Gln Gly Cys Arg Gln Asn Tyr His Gly Val Cys Asn
180         185         190
Gly Gly Pro Arg His Ala Ala His Ala Arg Gln Arg Pro Ala Asp Arg
195         200         205
Cys Ser Pro Ala Thr Ala Arg Val Cys Ala Leu Gly His Arg Gln Trp
210         215         220
Glu Thr Leu Gly Arg Ser Asp Pro Ala Pro Tyr Pro Cys Leu Pro Val
225         230         235         240
Val Pro Gly Gln Glu Ala Gly Cys Leu Pro Phe Leu Asn Gln Leu Pro
245         250         255
Pro Glu Cys Leu Leu Arg Val Leu Ala Gly Gly Leu Arg Arg Ala His
260         265         270
Gly Arg Arg Val Gly Thr Arg Leu Pro Ala Phe Phe Ser Asp Pro Asp
275         280         285
Pro Arg His Leu Leu Leu Thr Asn Trp Lys Ile Leu Cys Ile Pro
290         295         300

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<210> 144

151

<211> 1356

<212> DNA

<213> Homo sapiens

<400> 144

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ttctgtttct ctccgtgtg ttctctcccg ctgtgcgctt gcccgctct cgctgtctc 180
tctccccctc gccctctctt cggccccccc ctttcacgtt cactctgtct ctcccactat 240
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cagacgaatt ctcccccccc ccccaaaaaa aaaagccatc ccccgcctct gcccgcgtgc 420
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ccaacgccc ctgttcggtt tgcgacacgc agcagggagg tggcggcag cgtcgccggc 540
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gccttgcct cgtgctgcat tgcgtcttac cgccccagtg agacctgtg cggcggggg 660
ctggtggaca cctccagtt cgtctgtggg gaccgggct tctacttcag caggcccgc 720
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<210> 145

<211> 180

<212> PRT

<213> Homo sapiens

<400> 145

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Met Gly Ile Pro Met Gly Lys Ser Met Leu Val Leu Leu Thr Phe Leu
 1           5           10          15
Ala Phe Ala Ser Cys Cys Ile Ala Ala Tyr Arg Pro Ser Glu Thr Leu
          20          25          30
Cys Gly Gly Glu Leu Val Asp Thr Leu Gln Phe Val Cys Gly Asp Arg
          35          40          45
Gly Phe Tyr Phe Ser Arg Pro Ala Ser Arg Val Ser Arg Arg Ser Arg
          50          55          60
Gly Ile Val Glu Glu Cys Cys Phe Arg Ser Cys Asp Leu Ala Leu Leu
65          70          75          80
Glu Thr Tyr Cys Ala Thr Pro Ala Lys Ser Glu Arg Asp Val Ser Thr
          85          90          95
Pro Pro Thr Val Leu Pro Asp Asn Phe Pro Arg Tyr Pro Val Gly Lys
          100         105         110
Phe Phe Gln Tyr Asp Thr Trp Lys Gln Ser Thr Gln Arg Leu Arg Arg
          115         120         125
Gly Leu Pro Ala Leu Leu Arg Ala Arg Arg Gly His Val Leu Ala Lys
          130         135         140
Glu Leu Glu Ala Phe Arg Glu Ala Lys Arg His Arg Pro Leu Ile Ala
145          150         155         160
Leu Pro Thr Gln Asp Pro Ala His Gly Gly Ala Pro Pro Glu Met Ala
          165         170         175
Ser Asn Arg Lys

```

180

<210> 146
 <211> 3667
 <212> DNA
 <213> Homo sapiens

<400> 146

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caaatgtatg catgtgaaat atacagattt taaaaaagca gatcattaaa gattaggtca 240
taagggtgtag tctgtacatg gaggaagagc taagttgatt cagaataaca tggtttagatt 300
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aagcaactca acggaggagg cgaggagcgc cgggtaccgg gccgggggag ccgcgggctc 420
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gccgacgacc tccggcagct ctttggggac aggaagctgc ccctggcggg acaggtcctg 540
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<210> 147

<211> 556

<212> PRT

<213> Homo sapiens

<400> 147

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Met Met Asn Lys Leu Tyr Ile Gly Asn Leu Ser Pro Ala Val Thr Ala
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Asp Asp Leu Arg Gln Leu Phe Gly Asp Arg Lys Leu Pro Leu Ala Gly
      20             25             30
Gln Val Leu Leu Lys Ser Gly Tyr Ala Phe Val Asp Tyr Pro Asp Gln
      35             40             45
Asn Trp Ala Ile Arg Ala Ile Glu Thr Leu Ser Gly Lys Val Glu Leu
      50             55             60
His Gly Lys Ile Met Glu Val Asp Tyr Ser Val Ser Lys Lys Leu Arg
      65             70             75             80
Ser Arg Lys Ile Gln Ile Arg Asn Ile Pro Pro His Leu Gln Trp Glu
      85             90             95
Val Leu Asp Gly Leu Leu Ala Gln Tyr Gly Thr Val Glu Asn Val Glu
      100            105            110
Gln Val Asn Thr Asp Thr Glu Thr Ala Val Val Asn Val Thr Tyr Ala
      115            120            125
Thr Arg Glu Glu Ala Lys Ile Ala Met Glu Lys Leu Ser Gly His Gln
      130            135            140
Phe Glu Asn Tyr Ser Phe Lys Ile Ser Tyr Ile Pro Asp Glu Glu Val
      145            150            155            160
Ser Ser Pro Ser Pro Pro Gln Arg Ala Gln Arg Gly Asp His Ser Ser
      165            170            175
Arg Glu Gln Gly His Ala Pro Gly Gly Thr Ser Gln Ala Arg Gln Ile
      180            185            190
Asp Phe Pro Leu Arg Ile Leu Val Pro Thr Gln Phe Val Gly Ala Ile
      195            200            205
Ile Gly Lys Glu Gly Leu Thr Ile Lys Asn Ile Thr Lys Gln Thr Gln
      210            215            220
Ser Arg Val Asp Ile His Arg Lys Glu Asn Ser Gly Ala Ala Glu Lys
      225            230            235            240
Pro Val Thr Ile His Ala Thr Pro Glu Gly Thr Ser Glu Ala Cys Arg
      245            250            255
Met Ile Leu Glu Ile Met Gln Lys Glu Ala Asp Glu Thr Lys Leu Ala
      260            265            270
Glu Glu Ile Pro Leu Lys Ile Leu Ala His Asn Gly Leu Val Gly Arg
      275            280            285
Leu Ile Gly Lys Glu Gly Arg Asn Leu Lys Lys Ile Glu His Glu Thr
      290            295            300

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154

Gly Thr Lys Ile Thr Ile Ser Ser Leu Gln Asp Leu Ser Ile Tyr Asn
 305 310 315 320
 Pro Glu Arg Thr Ile Thr Val Lys Gly Thr Val Glu Ala Cys Ala Ser
 325 330 335
 Ala Glu Ile Glu Ile Met Lys Lys Leu Arg Glu Ala Phe Glu Asn Asp
 340 345 350
 Met Leu Ala Val Asn Thr His Ser Gly Tyr Phe Ser Ser Leu Tyr Pro
 355 360 365
 His His Gln Phe Gly Pro Phe Pro His His His Ser Tyr Pro Glu Gln
 370 375 380
 Glu Ile Val Asn Leu Phe Ile Pro Thr Gln Ala Val Gly Ala Ile Ile
 385 390 395 400
 Gly Lys Lys Gly Ala His Ile Lys Gln Leu Ala Arg Phe Ala Gly Ala
 405 410 415
 Ser Ile Lys Ile Ala Pro Ala Glu Gly Pro Asp Val Ser Glu Arg Met
 420 425 430
 Val Ile Ile Thr Gly Pro Pro Glu Ala Gln Phe Lys Ala Gln Gly Arg
 435 440 445
 Ile Phe Gly Lys Leu Lys Glu Glu Asn Phe Phe Asn Pro Lys Glu Glu
 450 455 460
 Val Lys Leu Glu Ala His Ile Arg Val Pro Ser Ser Thr Ala Gly Arg
 465 470 475 480
 Val Ile Gly Lys Gly Gly Lys Thr Val Asn Glu Leu Gln Asn Leu Thr
 485 490 495
 Ser Ala Glu Val Ile Val Pro Arg Asp Gln Thr Pro Asp Glu Asn Glu
 500 505 510
 Glu Val Ile Val Arg Ile Ile Gly His Phe Phe Ala Ser Gln Thr Ala
 515 520 525
 Gln Arg Lys Ile Arg Glu Ile Val Gln Gln Val Lys Gln Gln Glu Gln
 530 535 540
 Lys Tyr Pro Gln Gly Val Ala Ser Gln Arg Ser Lys
 545 550 555

<210> 148

<211> 1475

<212> DNA

<213> Homo sapiens

<400> 148

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 cgctgtgtg aaagctctgg tctccctgag gagctacat ctgcaaatcg tgactaagta 1080

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catagcagag acatctgtat gcattcctgt cattacccat tgtaacagag ccacaaacta 1320
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<210> 149

<211> 403

<212> PRT

<213> Homo sapiens

<400> 149

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Met Ala His Ala Met Glu Asn Ser Trp Thr Ile Ser Lys Glu Tyr His
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Ile Asp Glu Glu Val Gly Phe Ala Leu Pro Asn Pro Gln Glu Asn Leu
      20           25           30
Pro Asp Phe Tyr Asn Asp Trp Met Phe Ile Ala Lys His Leu Pro Asp
      35           40           45
Leu Ile Glu Ser Gly Gln Leu Arg Glu Arg Val Glu Lys Leu Asn Met
      50           55           60
Leu Ser Ile Asp His Leu Thr Asp His Lys Ser Gln Arg Leu Ala Arg
      65           70           75           80
Leu Val Leu Gly Cys Ile Thr Met Ala Tyr Val Trp Gly Lys Gly His
      85           90           95
Gly Asp Val Arg Lys Val Leu Pro Arg Asn Ile Ala Val Pro Tyr Cys
      100          105          110
Gln Leu Ser Lys Lys Leu Glu Leu Pro Pro Ile Leu Val Tyr Ala Asp
      115          120          125
Cys Val Leu Ala Asn Trp Lys Lys Lys Asp Pro Asn Lys Pro Leu Thr
      130          135          140
Tyr Glu Asn Met Asp Val Leu Phe Ser Phe Arg Asp Gly Asp Cys Ser
      145          150          155          160
Lys Gly Phe Phe Leu Val Ser Leu Leu Val Glu Ile Ala Ala Ala Ser
      165          170          175
Ala Ile Lys Val Ile Pro Thr Val Phe Lys Ala Met Gln Met Gln Glu
      180          185          190
Arg Asp Thr Leu Leu Lys Ala Leu Leu Glu Ile Ala Ser Cys Leu Glu
      195          200          205
Lys Ala Leu Gln Val Phe His Gln Ile His Asp His Val Asn Pro Lys
      210          215          220
Ala Phe Phe Ser Val Leu Arg Ile Tyr Leu Ser Gly Trp Lys Gly Asn
      225          230          235          240
Pro Gln Leu Ser Asp Gly Leu Val Tyr Glu Gly Phe Trp Glu Asp Pro
      245          250          255
Lys Glu Phe Ala Gly Gly Ser Ala Gly Gln Ser Ser Val Phe Gln Cys
      260          265          270
Phe Asp Val Leu Leu Gly Ile Gln Gln Thr Ala Gly Gly Gly His Ala
      275          280          285
Ala Gln Phe Leu Gln Asp Met Arg Arg Tyr Met Pro Pro Ala His Arg
      290          295          300
Asn Phe Leu Cys Ser Leu Glu Ser Asn Pro Ser Val Arg Glu Phe Val
      305          310          315          320
Leu Ser Lys Gly Asp Ala Gly Leu Arg Glu Ala Tyr Asp Ala Cys Val
      325          330          335
Lys Ala Leu Val Ser Leu Arg Ser Tyr His Leu Gln Ile Val Thr Lys
      340          345          350

```

156

Tyr Ile Leu Ile Pro Ala Ser Gln Gln Pro Lys Glu Asn Lys Thr Ser
 355 360 365
 Glu Asp Pro Ser Lys Leu Glu Ala Lys Gly Thr Gly Gly Thr Asp Leu
 370 375 380
 Met Asn Phe Leu Lys Thr Val Arg Ser Thr Thr Glu Lys Ser Leu Leu
 385 390 395 400
 Lys Glu Gly

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 <213> Homo sapiens

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 <213> Homo sapiens

157

<400> 151

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          35          40          45
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Thr Asn Lys Val Ser Ala Gln Glu Gln Arg Ile Cys Arg His His Met
          65          70          75          80
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          85          90          95
Arg Asn Arg Ala Thr Ala Leu Ile Glu Asp Ile Phe Ala Arg Asp Lys
          100          105          110
Ile Pro Ile Val Val Gly Gly Thr Asn Tyr Tyr Ile Glu Ser Leu Leu
          115          120          125
Trp Lys Val Leu Val Asn Thr Lys Pro Gln Glu Met Gly Thr Glu Lys
          130          135          140
Val Ile Asp Arg Lys Val Glu Leu Glu Lys Glu Asp Gly Leu Val Leu
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His Lys Arg Leu Ser Gln Val Asp Pro Glu Met Ala Ala Lys Leu His
          165          170          175
Pro His Asp Lys Arg Lys Val Ala Arg Ser Leu Gln Val Phe Glu Glu
          180          185          190
Thr Gly Ile Ser His Ser Glu Phe Leu His Arg Gln His Thr Glu Glu
          195          200          205
Gly Gly Gly Pro Leu Gly Gly Pro Leu Lys Phe Ser Asn Pro Cys Ile
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Leu Trp Leu His Ala Asp Gln Ala Val Leu Asp Glu Arg Leu Asp Lys
          225          230          235          240
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Phe His Arg Arg Tyr Asn Gln Lys Asn Val Ser Glu Asn Ser Gln Asp
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Tyr Gln His Gly Ile Phe Gln Ser Ile Gly Phe Lys Glu Phe His Glu
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Tyr Leu Ile Thr Glu Gly Lys Cys Thr Leu Glu Thr Ser Asn Gln Leu
          290          295          300
Leu Lys Lys Gly Ile Glu Ala Leu Lys Gln Val Thr Lys Arg Tyr Ala
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          325          330          335
Pro Ile Val Pro Pro Val Tyr Gly Leu Glu Val Ser Asp Val Ser Lys
          340          345          350
Trp Glu Glu Ser Val Leu Glu Pro Ala Leu Glu Ile Val Gln Ser Phe
          355          360          365
Ile Gln Gly His Lys Pro Thr Ala Thr Pro Ile Lys Met Pro Tyr Asn
          370          375          380
Glu Ala Glu Asn Lys Arg Ser Tyr His Leu Cys Asp Leu Cys Asp Arg
          385          390          395          400
Ile Ile Ile Gly Asp Arg Glu Trp Ala Ala His Ile Lys Ser Lys Ser
          405          410          415
His Leu Asn Gln Leu Lys Lys Arg Arg Arg Leu Asp Ser Asp Ala Val
          420          425          430
Asn Thr Ile Glu Ser Gln Ser Val Ser Pro Asp His Asn Lys Glu Pro
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Lys Glu Lys Gly Ser Pro Gly Gln Asn Asp Gln Glu Leu Lys Cys Ser

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158

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Val
465

<210> 152
<211> 2129
<212> DNA
<213> Homo sapiens

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<211> 467
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<213> Homo sapiens

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 35 40 45
 Gly Glu Ile Val Ser Ala Asp Ser Met Gln Val Tyr Glu Gly Leu Asp
 50 55 60
 Ile Ile Thr Asn Lys Val Ser Ala Gln Glu Gln Arg Ile Cys Arg His
 65 70 75 80
 His Met Ile Ser Phe Val Asp Pro Leu Val Thr Asn Tyr Thr Val Val
 85 90 95
 Asp Phe Arg Asn Arg Ala Thr Ala Leu Ile Glu Asp Ile Phe Ala Arg
 100 105 110
 Asp Lys Ile Pro Ile Val Val Gly Gly Thr Asn Tyr Tyr Ile Glu Ser
 115 120 125
 Leu Leu Trp Lys Val Leu Val Asn Thr Lys Pro Gln Glu Met Gly Thr
 130 135 140
 Glu Lys Val Ile Asp Arg Lys Val Glu Leu Glu Lys Glu Asp Gly Leu
 145 150 155 160
 Val Leu His Lys Arg Leu Ser Gln Val Asp Pro Glu Met Ala Ala Lys
 165 170 175
 Leu His Pro His Asp Lys Arg Lys Val Ala Arg Ser Leu Gln Val Phe
 180 185 190
 Glu Glu Thr Gly Ile Ser His Ser Glu Phe Leu His Arg Gln His Thr
 195 200 205
 Glu Glu Gly Gly Gly Pro Leu Gly Gly Pro Leu Lys Phe Ser Asn Pro
 210 215 220
 Cys Ile Leu Trp Leu His Ala Asp Gln Ala Val Leu Asp Glu Arg Leu
 225 230 235 240
 Asp Lys Arg Val Asp Asp Met Leu Ala Ala Gly Leu Leu Glu Glu Leu
 245 250 255
 Arg Asp Phe His Arg Arg Tyr Asn Gln Lys Asn Val Ser Glu Asn Ser
 260 265 270
 Gln Asp Tyr Gln His Gly Ile Phe Gln Ser Ile Gly Phe Lys Glu Phe
 275 280 285
 His Glu Tyr Leu Ile Thr Glu Gly Lys Cys Thr Leu Glu Thr Ser Asn
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 Tyr Ala Arg Lys Gln Asn Arg Trp Val Lys Asn Arg Phe Leu Ser Arg
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 385 390 395 400
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 405 410 415
 Lys Ser His Leu Asn Gln Leu Lys Lys Arg Arg Arg Leu Asp Ser Asp
 420 425 430
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<210> 154
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 <212> DNA
 <213> Homo sapiens

<400> 154

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161

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<210> 155

<211> 1066

<212> PRT

<213> Homo sapiens

<400> 155

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 35          40          45
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 50          55          60
Gln Gln Arg Tyr Leu Leu Leu Ala Gly Ala Pro Arg Glu Leu Ala Val
 65          70          75          80
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100         105         110
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130         135         140
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145         150         155         160
Lys Cys Tyr Val Arg Gly Asn Asp Leu Glu Leu Asp Ser Ser Asp Asp
165         170         175
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180         185         190
Glu Thr Gly Met Cys Gln Leu Gly Thr Ser Gly Gly Phe Thr Gln Asn
195         200         205
Thr Val Tyr Phe Gly Ala Pro Gly Ala Tyr Asn Trp Lys Gly Asn Ser
210         215         220

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163

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 Gln Leu Ser Thr Ser Ser His Gln Asp Asn Leu Trp Pro Met Ile Leu
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 755 760 765
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 770 775 780
 Met Lys Thr Val Glu Asp Val Gly Ser Pro Leu Lys Tyr Glu Phe Gln
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 Pro Gly Asp Leu Ile Asn Pro Leu Asn Leu Thr Leu Ser Asp Pro Gly
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<210> 159

<211> 624

<212> PRT

<213> Homo sapiens

<400> 159

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Ser Glu Lys Thr His Pro Lys Asp Tyr Pro Arg Arg Ala Asn His Trp
35          40          45
Ser Ala Ile Ile Gly Gly Ser His Ser Lys Asn Tyr Val Leu Trp Glu
50          55          60
Tyr Gly Gly Tyr Ala Ser Glu Gly Val Lys Gln Val Ala Glu Leu Gly
65          70          75          80
Ser Pro Val Lys Met Glu Glu Glu Ile Arg Gln Gln Ser Asp Glu Val
85          90          95
Leu Thr Val Ile Lys Ala Lys Ala Gln Trp Pro Ala Trp Gln Pro Leu
100         105         110
Asn Val Arg Ala Ala Pro Ser Ala Glu Phe Ser Val Asp Arg Thr Arg
115         120         125
His Leu Met Ser Phe Leu Thr Met Met Gly Pro Ser Pro Asp Trp Asn

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170

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Val Gly Leu Ser Ala	Glu Asp Leu Cys Thr Lys	Glu Cys Gly Trp Val
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Gly Val Thr Tyr Glu	Ser Pro Asn Lys Pro Thr	Ile Pro Gln Glu Lys
180	185	190
Ile Arg Pro Leu Thr	Ser Leu Asp His Pro Gln	Ser Pro Phe Tyr Asp
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Pro Glu Gly Gly Ser	Ile Thr Gln Val Ala Arg	Val Val Ile Glu Arg
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Ile Ala Arg Lys Gly	Glu Gln Cys Asn Ile Val	Pro Asp Asn Val Asp
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Pro Glu Thr Cys Ile	Tyr Ser Asn Trp Ser Pro	Trp Ser Ala Cys Ser
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Ser Ser Thr Cys Asp	Lys Gly Lys Arg Met Arg	Gln Arg Met Leu Lys
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385	390	395
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Ser Gln Ala Glu Lys	Cys Met Met Pro Glu Cys	His Thr Ile Pro Cys
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Lys Gly Met Arg Thr	Arg Gln Arg Met Leu Lys	Ser Leu Ala Glu Leu
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Cys Asn Lys Ser Cys	Gly Lys Gly His Val Ile	Arg Thr Arg Met Ile
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Gln Met Glu Pro Gln	Phe Gly Gly Ala Pro Cys	Pro Glu Thr Val Gln
515	520	525
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Lys Leu Arg Trp Arg	Glu Ala Arg Glu Ser Arg	Arg Ser Glu Gln Leu
545	550	555
Lys Glu Glu Ser Glu	Gly Glu Gln Phe Pro Gly	Cys Arg Met Arg Pro
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Glu Arg Tyr Met Thr	Val Lys Lys Arg Phe Lys	Ser Ser Gln Phe Thr

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 <213> Homo sapiens

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172

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<210> 161

<211> 888

<212> PRT

<213> Homo sapiens

<400> 161

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Ser Asp Leu Trp Ser Ser Ser Ser Ser Leu Glu Ser Ser Ser Phe Pro
35     40     45
Leu Pro Lys Gln Tyr Leu Asp Val Ser Ser Gln Thr Asp Ile Ser Gly
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Ser Phe Gly Ile Asn Ser Asn Asn Gln Leu Ala Glu Lys Val Arg Leu
65     70     75     80
Arg Leu Arg Tyr Glu Glu Ala Lys Arg Arg Ile Ala Asn Leu Lys Ile
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Gln Leu Ala Lys Leu Asp Ser Glu Ala Trp Pro Gly Val Leu Asp Ser
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165    170    175
Lys Arg Asn Gln Leu Val Arg Glu Leu Glu Glu Ala Thr Arg Gln Val
180    185    190
Ala Thr Leu His Ser Gln Leu Lys Ser Leu Ser Ser Ser Met Gln Ser
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210    215    220
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Pro Pro Cys Ser Pro Leu Met Ala Asp Pro Leu Leu Ala Gly Asp Ala

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173

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				355				360					365				
Glu	Pro	Gly	Thr	Glu	Gly	Lys	Gln	Leu	Gly	Gln	Ala	Val	Asn	Thr	Ala		
				370			375				380						
Gln	Gly	Cys	Gly	Leu	Lys	Val	Ala	Cys	Val	Ser	Ala	Ala	Val	Ser	Asp		
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Glu	Ser	Val	Ala	Gly	Asp	Ser	Gly	Val	Tyr	Glu	Ala	Ser	Val	Gln	Arg		
				405					410					415			
Leu	Gly	Ala	Ser	Glu	Ala	Ala	Ala	Phe	Asp	Ser	Asp	Glu	Ser	Glu	Ala		
				420				425						430			
Val	Gly	Ala	Thr	Arg	Ile	Gln	Ile	Ala	Leu	Lys	Tyr	Asp	Glu	Lys	Asn		
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Lys	Gln	Phe	Ala	Ile	Leu	Ile	Ile	Gln	Leu	Ser	Asn	Leu	Ser	Ala	Leu		
				450			455				460						
Leu	Gln	Gln	Gln	Asp	Gln	Lys	Val	Asn	Ile	Arg	Val	Ala	Val	Leu	Pro		
465					470				475						480		
Cys	Ser	Glu	Ser	Thr	Thr	Cys	Leu	Phe	Arg	Thr	Arg	Pro	Leu	Asp	Ala		
				485					490					495			
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Glu	Val	Cys	Arg	Ser	Gly	Glu	Arg	Ser	Thr	Arg	Trp	Tyr	Asn	Leu	Leu		
545					550				555						560		
Ser	Tyr	Lys	Tyr	Leu	Lys	Lys	Gln	Ser	Arg	Glu	Leu	Lys	Pro	Val	Gly		
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Pro	Ser	Gln	Gly	Pro	Phe	Leu	Arg	Gly	Ser	Thr	Ile	Ile	Arg	Ser	Lys		
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Thr	Phe	Ser	Pro	Gly	Pro	Gln	Ser	Gln	Tyr	Val	Cys	Arg	Leu	Asn	Arg		
705				710					715						720		
Ser	Asp	Ser	Asp	Ser	Ser	Thr	Leu	Ser	Lys	Lys	Pro	Pro	Phe	Val	Arg		
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Asn	Ser	Leu	Glu	Arg	Arg	Ser	Val	Arg	Met	Lys	Arg	Pro	Ser	Ser	Val		
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Lys	Ser	Leu	Arg	Ser	Glu	Arg	Leu	Ile	Arg	Thr	Ser	Leu	Asp	Leu	Glu		
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Leu	Asp	Leu	Gln	Ala	Thr	Arg	Thr	Trp	His	Ser	Gln	Leu	Thr	Gln	Glu		
				770			775				780						
Ile	Ser	Val	Leu	Lys	Glu	Leu	Lys	Glu	Gln	Leu	Glu	Gln	Ala	Lys	Ser		

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His Gly Glu Lys	Glu Leu Pro Gln Trp	Leu Arg Glu Asp Glu Arg Phe				
	805	810		815		
Arg Leu Leu Leu Arg	Met Leu Glu Lys Arg Met Asp Arg Ala Glu His					
	820	825		830		
Lys Gly Glu Leu Gln Thr Asp	Lys Met Met Arg Ala Ala Ala Lys Asp					
	835	840		845		
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<211> 5794

<212> DNA

<213> Homo sapiens

<400> 162

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<213> Homo sapiens

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 agtgccctct ctgaacctca gtttccctcat ctgcaaaatg ggaacaatga cgtgcctacc 1320

180

tcttagacat gttgtgagga gactatgata taacatgtgt atgtaaatct tcatgtgatt 1380
 gtcattgtaag gcttaacaca gtgggtggtg agttctgact aaagggtacc tgttgtcgtg 1440
 aaaaaaaaaa aaaa 1454

<210> 167
 <211> 276
 <212> PRT
 <213> Homo sapiens

<400> 167
 Met Arg Ala Pro His Leu His Leu Ser Ala Ala Ser Gly Ala Arg Ala
 1 5 10 15
 Leu Ala Lys Leu Leu Pro Leu Leu Met Ala Gln Leu Trp Ala Ala Glu
 20 25 30
 Ala Ala Leu Leu Pro Gln Asn Asp Thr Arg Leu Asp Pro Glu Ala Tyr
 35 40 45
 Gly Ala Pro Cys Ala Arg Gly Ser Gln Pro Trp Gln Val Ser Leu Phe
 50 55 60
 Asn Gly Leu Ser Phe His Cys Ala Gly Val Leu Val Asp Gln Ser Trp
 65 70 75 80
 Val Leu Thr Ala Ala His Cys Gly Asn Lys Pro Leu Trp Ala Arg Val
 85 90 95
 Gly Asp Asp His Leu Leu Leu Leu Gln Gly Glu Gln Leu Arg Arg Thr
 100 105 110
 Thr Arg Ser Val Val His Pro Lys Tyr His Gln Gly Ser Gly Pro Ile
 115 120 125
 Leu Pro Arg Arg Thr Asp Glu His Asp Leu Met Leu Leu Lys Leu Ala
 130 135 140
 Arg Pro Val Val Pro Gly Pro Arg Val Arg Ala Leu Gln Leu Pro Tyr
 145 150 155 160
 Arg Cys Ala Gln Pro Gly Asp Gln Cys Gln Val Ala Gly Trp Gly Thr
 165 170 175
 Thr Ala Ala Arg Arg Val Lys Tyr Asn Lys Gly Leu Thr Cys Ser Ser
 180 185 190
 Ile Thr Ile Leu Ser Pro Lys Glu Cys Glu Val Phe Tyr Pro Gly Val
 195 200 205
 Val Thr Asn Asn Met Ile Cys Ala Gly Leu Asp Arg Gly Gln Asp Pro
 210 215 220
 Cys Gln Ser Asp Ser Gly Gly Pro Leu Val Cys Asp Glu Thr Leu Gln
 225 230 235 240
 Gly Ile Leu Ser Trp Gly Val Tyr Pro Cys Gly Ser Ala Gln His Pro
 245 250 255
 Ala Val Tyr Thr Gln Ile Cys Lys Tyr Met Ser Trp Ile Asn Lys Val
 260 265 270
 Ile Arg Ser Asn
 275

<210> 168
 <211> 1506
 <212> DNA
 <213> Homo sapiens

<400> 168
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 agcccggggc agggcgggg gccagtgtg tgacacacgc ttagctgtc tcccggctg 120
 gctgctcgc tctctctgg ggacacagag gtcggcaggc agcacacaga gggacctacg 180
 ggcagctgtt ccttccccg actcaagaat cccggaggc cggaggcct gcagcaggag 240

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cggccatgaa gaagctgatg gtggtgctga gtctgattgc tgcagcctgg gcagaggagc 300
agaataagtt ggtgcatggc ggaccctgcg acaagacatc tcaccctac caagctgcc 360
tctacacctc gggccacttg ctctgtggtg gggtccttat ccatccactg tgggtcctca 420
cagctgcccc ctgcaaaaaa ccgaatcttc aggtcttcct ggggaagcat aaccttcggc 480
aaagggagag ttcccaggag cagagttctg ttgtccgggc tgtgatccac cctgactatg 540
atgccgccag ccatgaccag gacatcatgc tgttgcgctt ggcacgcca gccaaactct 600
ctgaactcat ccagccccctt cccctggaga gggactgctc agccaacacc accagctgcc 660
acatcctggg ctggggcaag acagcagatg gtgatttccc tgacaccatc cagtgtgcat 720
acatccacct ggtgtcccggt gaggagtgtg agcatgccta ccctggccag atcaccaga 780
acatgttgtg tgctggggat gagaagtacg ggaaggattc ctgccaggtt gattctgggg 840
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aagatgaaga taaggatgat acagtctcca tcaggcagtg gctgttgga agatttaaga 1440
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<210> 169

<211> 244

<212> PRT

<213> Homo sapiens

<400> 169

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Met Lys Lys Leu Met Val Val Leu Ser Leu Ile Ala Ala Ala Trp Ala
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Glu Glu Gln Asn Lys Leu Val His Gly Gly Pro Cys Asp Lys Thr Ser
      20             25             30
His Pro Tyr Gln Ala Ala Leu Tyr Thr Ser Gly His Leu Leu Cys Gly
      35             40             45
Gly Val Leu Ile His Pro Leu Trp Val Leu Thr Ala Ala His Cys Lys
      50             55             60
Lys Pro Asn Leu Gln Val Phe Leu Gly Lys His Asn Leu Arg Gln Arg
      65             70             75             80
Glu Ser Ser Gln Glu Gln Ser Ser Val Val Arg Ala Val Ile His Pro
      85             90             95
Asp Tyr Asp Ala Ala Ser His Asp Gln Asp Ile Met Leu Leu Arg Leu
      100            105            110
Ala Arg Pro Ala Lys Leu Ser Glu Leu Ile Gln Pro Leu Pro Leu Glu
      115            120            125
Arg Asp Cys Ser Ala Asn Thr Thr Ser Cys His Ile Leu Gly Trp Gly
      130            135            140
Lys Thr Ala Asp Gly Asp Phe Pro Asp Thr Ile Gln Cys Ala Tyr Ile
      145            150            155            160
His Leu Val Ser Arg Glu Glu Cys Glu His Ala Tyr Pro Gly Gln Ile
      165            170            175
Thr Gln Asn Met Leu Cys Ala Gly Asp Glu Lys Tyr Gly Lys Asp Ser
      180            185            190
Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Gly Asp His Leu Arg
      195            200            205
Gly Leu Val Ser Trp Gly Asn Ile Pro Cys Gly Ser Lys Glu Lys Pro
      210            215            220
Gly Val Tyr Thr Asn Val Cys Arg Tyr Thr Asn Trp Ile Gln Lys Thr

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225
Ile Gln Ala Lys

230

235

240

<210> 170
<211> 1641
<212> DNA
<213> Homo sapiens

<400> 170
agcgagtgcg cgctcctcct cgcccgcgcg taggtccatc ccggcccagc caccatgtcc 60
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cagggtgcgc tgagctccgc tcgcccgcgc gcccttgga gcagcagcct ctacggcctc 180
ggcgccctgc ggccgcgcgt ggccgtgcgc tctgcctatg ggggcccggt gggcgccgcg 240
atccgcgagg tcaccattaa ccagagcctg ctggccccgc tgcggctgga cgccgacccc 300
tccctccagc ggggtgcgca ggaggagagc gagcagatca agaccctcaa caacaagttt 360
gcctccttca tcgacaaggc gcggtttctg gagcagcaga acaagctgct ggagaccaag 420
tggacgctgc tgcaggagca gaagtgcgcc aagagcagcc gcctcccaga catctttgag 480
gccagattg ctggccttcg gggtcagctt gaggcactgc aggtggatgg gggcgccctg 540
gaggcggagc tgcggagcat gcaggatgtg gtggaggact tcaagaataa gtacgaagat 600
gaaattaacc gccgcacagc tgctgagaat gagtttgttg tgctgaagaa ggatgtggat 660
gctgcctaca cgagcaaggc ggagctggag gccaaagtg atgccctgaa tgatgagatc 720
aacttcttca ggaccctcaa tgagacggag ttgacagagc tgcagtccca gatctccgac 780
acatctgtgg tgctgtccat ggacaacagt cgctccctgg acctggacgg catcatcgct 840
gaggccaagg cacagtatga ggagatggcc aaatgcagcc gggctgaggc tgaagcctgg 900
taccagacca agtttgagac cctccaggcc caggctggga agcatgggga cgacctcgg 960
aatacccgga atgagatttc agagatgaac cgggccatcc agaggctgca ggctgagatc 1020
gacaacatca agaaccagcg tgccaagttg gaggcgcgca ttgccgaggc tgaggagcgt 1080
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cacaatcaca agaagattcc caccctgcc tccatgcct ggtcccaaga cagtgagaca 1560
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atccaaaaaa aaaaaaaaaa a 1641

<210> 171
<211> 469
<212> PRT
<213> Homo sapiens

<400> 171
Met Ser Ile His Phe Ser Ser Pro Val Phe Thr Ser Arg Ser Ala Ala
1 5 10 15
Phe Ser Gly Arg Gly Ala Gln Val Arg Leu Ser Ser Ala Arg Pro Gly
20 25 30
Gly Leu Gly Ser Ser Ser Leu Tyr Gly Leu Gly Ala Ser Arg Pro Arg
35 40 45
Val Ala Val Arg Ser Ala Tyr Gly Gly Pro Val Gly Ala Gly Ile Arg
50 55 60
Glu Val Thr Ile Asn Gln Ser Leu Leu Ala Pro Leu Arg Leu Asp Ala
65 70 75 80
Asp Pro Ser Leu Gln Arg Val Arg Gln Glu Glu Ser Glu Gln Ile Lys
85 90 95

Ala Leu Asn Asn Lys Phe Ala Ser Phe Ile Asp Lys Val Arg Phe Leu
 100 105 110
 Glu Gln Gln Asn Lys Leu Leu Glu Thr Lys Trp Thr Leu Leu Gln Glu
 115 120 125
 Gln Lys Ser Ala Lys Ser Ser Arg Leu Pro Asp Ile Phe Glu Ala Gln
 130 135 140
 Ile Ala Gly Leu Arg Gly Gln Leu Glu Ala Leu Gln Val Asp Gly Gly
 145 150 155 160
 Arg Leu Glu Gln Gly Leu Arg Thr Met Gln Asp Val Val Glu Asp Phe
 165 170 175
 Lys Asn Lys Tyr Glu Asp Glu Ile Asn Arg Arg Thr Ala Ala Glu Asn
 180 185 190
 Glu Phe Val Val Leu Lys Lys Asp Val Asp Ala Ala Tyr Met Ser Lys
 195 200 205
 Val Glu Leu Glu Ala Lys Val Asp Ala Leu Asn Asp Glu Ile Asn Phe
 210 215 220
 Leu Arg Thr Leu Asn Glu Thr Glu Leu Thr Glu Leu Gln Ser Gln Ile
 225 230 235 240
 Ser Asp Thr Ser Val Val Leu Ser Met Asp Asn Ser Arg Ser Leu Asp
 245 250 255
 Leu Asp Gly Ile Ile Ala Glu Val Lys Ala Gln Tyr Glu Glu Met Ala
 260 265 270
 Lys Cys Ser Arg Ala Glu Ala Glu Ala Trp Tyr Gln Thr Lys Phe Glu
 275 280 285
 Thr Leu Gln Ala Gln Ala Gly Lys His Gly Asp Asp Leu Arg Asn Thr
 290 295 300
 Arg Asn Glu Ile Ser Glu Met Asn Arg Ala Ile Gln Arg Leu Gln Ala
 305 310 315 320
 Glu Ile Asp Asn Ile Lys Asn Gln Arg Ala Lys Leu Glu Ala Ala Ile
 325 330 335
 Ala Glu Ala Glu Glu Cys Gly Glu Leu Ala Leu Lys Asp Ala Arg Ala
 340 345 350
 Lys Gln Glu Glu Leu Glu Ala Ala Leu Gln Arg Ala Lys Gln Asp Met
 355 360 365
 Ala Arg Gln Leu Arg Glu Tyr Gln Glu Leu Met Ser Val Lys Leu Ala
 370 375 380
 Leu Asp Ile Glu Ile Ala Thr Tyr Arg Lys Leu Leu Glu Gly Glu Glu
 385 390 395 400
 Ser Arg Leu Ala Gly Asp Gly Val Gly Ala Val Asn Ile Ser Val Met
 405 410 415
 Asn Ser Thr Gly Gly Ser Ser Ser Gly Gly Gly Ile Gly Leu Thr Leu
 420 425 430
 Gly Gly Thr Met Gly Ser Asn Ala Leu Ser Phe Ser Ser Ala Gly
 435 440 445
 Pro Gly Leu Leu Lys Ala Tyr Ser Ile Arg Thr Ala Ser Ala Ser Arg
 450 455 460
 Arg Ser Ala Arg Asp
 465

<210> 172

<211> 1640

<212> DNA

<213> Homo sapiens

<400> 172

gcgagtgcgc gctctctctc gcccgccgct aggtccatcc cggcccagcc accatgtcca 60
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184

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agggtgcgcct gagctccgct cgccccggcg gccttggcag cagcagcctc tacggcctcg 180
gcgcctcgcg gccgcgcgtg gccgtgcgct ctgcctatgg gggcccggtg ggcgcggca 240
tccgcgaggt caccattaac cagagcctgc tggccccgct gcggctggac gccgacct 300
ccctccagcg ggtgcgccag gaggagagcg agcagatcaa gacctcaac aacaagttg 360
cctccttcat cgacaagggt cggtttctgg agcagcagaa caagctgctg gagaccaagt 420
ggacgctgct gcaggagcag aagtcggcca agagcagccg cctcccagac atctttgag 480
cccagattgc tggccttcgg ggtcagcttg aggcaactga ggtggatggg ggcgccttg 540
aggcggagct gcggagcatg caggatgttg tggaggactt caagaataag tacgaagatg 600
aaattaaccg ccgcacagct gctgagaatg agtttgtggt gctgaagaag gatgtggatg 660
ctgcctacat gagcaagggt gagctggagg ccaagggtga tgccctgaat gatgagatca 720
acttcctcag gacctcaat gagacggagt tgacagagct gcagtcccag atctccgaca 780
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tggccttga catcgagatc gccacctacc gcaagctgct ggaggcgag gagagccggt 1260
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acaatcacia gaagattccc acccctgcct cccatgcctg gtcccaagac agtgagacag 1560
tctggaaagt gatgtcagaa tagcttccaa taaagcagcc tcattctgag gctgagtga 1620
tccaaaaaaa aaaaaaaaaa

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<210> 173

<211> 469

<212> PRT

<213> Homo sapiens

<400> 173

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Met Ser Ile His Phe Ser Ser Pro Val Phe Thr Ser Arg Ser Ala Ala
1      5      10      15
Phe Ser Gly Arg Gly Ala Gln Val Arg Leu Ser Ser Ala Arg Pro Gly
20     25     30
Gly Leu Gly Ser Ser Ser Leu Tyr Gly Leu Gly Ala Ser Arg Pro Arg
35     40     45
Val Ala Val Arg Ser Ala Tyr Gly Gly Pro Val Gly Ala Gly Ile Arg
50     55     60
Glu Val Thr Ile Asn Gln Ser Leu Leu Ala Pro Leu Arg Leu Asp Ala
65     70     75     80
Asp Pro Ser Leu Gln Arg Val Arg Gln Glu Glu Ser Glu Gln Ile Lys
85     90     95
Thr Leu Asn Asn Lys Phe Ala Ser Phe Ile Asp Lys Val Arg Phe Leu
100    105    110
Glu Gln Gln Asn Lys Leu Leu Glu Thr Lys Trp Thr Leu Leu Gln Glu
115    120    125
Gln Lys Ser Ala Lys Ser Ser Arg Leu Pro Asp Ile Phe Glu Ala Gln
130    135    140
Ile Ala Gly Leu Arg Gly Gln Leu Glu Ala Leu Gln Val Asp Gly Gly
145    150    155    160
Arg Leu Glu Ala Glu Leu Arg Ser Met Gln Asp Val Val Glu Asp Phe
165    170    175
Lys Asn Lys Tyr Glu Asp Glu Ile Asn Arg Arg Thr Ala Ala Glu Asn
180    185    190
Glu Phe Val Val Leu Lys Lys Asp Val Asp Ala Ala Tyr Met Ser Lys

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Val	Glu	Leu	Glu	Ala	Lys	Val	Asp	Ala	Leu	Asn	Asp	Glu	Ile	Asn	Phe
210						215					220				
Leu	Arg	Thr	Leu	Asn	Glu	Thr	Glu	Leu	Thr	Glu	Leu	Gln	Ser	Gln	Ile
225					230					235					240
Ser	Asp	Thr	Ser	Val	Val	Leu	Ser	Met	Asp	Asn	Ser	Arg	Ser	Leu	Asp
				245					250					255	
Leu	Asp	Gly	Ile	Ile	Ala	Glu	Val	Lys	Ala	Gln	Tyr	Glu	Glu	Met	Ala
			260					265					270		
Lys	Cys	Ser	Arg	Ala	Glu	Ala	Glu	Ala	Trp	Tyr	Gln	Thr	Lys	Phe	Glu
	275						280					285			
Thr	Leu	Gln	Ala	Gln	Ala	Gly	Lys	His	Gly	Asp	Asp	Leu	Arg	Asn	Thr
290					295						300				
Arg	Asn	Glu	Ile	Ser	Glu	Met	Asn	Arg	Ala	Ile	Gln	Arg	Leu	Gln	Ala
305					310					315					320
Glu	Ile	Asp	Asn	Ile	Lys	Asn	Gln	Arg	Ala	Lys	Leu	Glu	Ala	Ala	Ile
			325						330					335	
Ala	Glu	Ala	Glu	Glu	Arg	Gly	Glu	Leu	Ala	Leu	Lys	Asp	Ala	Arg	Ala
			340					345					350		
Lys	Gln	Glu	Glu	Leu	Glu	Ala	Ala	Leu	Gln	Arg	Ala	Lys	Gln	Asp	Met
	355						360					365			
Ala	Arg	Gln	Leu	Arg	Glu	Tyr	Gln	Glu	Leu	Met	Ser	Val	Lys	Leu	Ala
	370					375					380				
Leu	Asp	Ile	Glu	Ile	Ala	Thr	Tyr	Arg	Lys	Leu	Leu	Glu	Gly	Glu	Glu
385					390					395					400
Ser	Arg	Leu	Ala	Gly	Asp	Gly	Val	Gly	Ala	Val	Asn	Ile	Ser	Val	Met
			405					410					415		
Asn	Ser	Thr	Gly	Gly	Ser	Ser	Ser	Gly	Gly	Gly	Ile	Gly	Leu	Thr	Leu
			420					425				430			
Gly	Gly	Thr	Met	Gly	Ser	Asn	Ala	Leu	Ser	Phe	Ser	Ser	Ser	Ala	Gly
		435					440					445			
Pro	Gly	Leu	Leu	Lys	Ala	Tyr	Ser	Ile	Arg	Thr	Ala	Ser	Ala	Ser	Arg
	450					455					460				
Arg	Ser	Ala	Arg	Asp											
465															

<210> 174

<211> 2186

<212> DNA

<213> Homo sapiens

<400> 174

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acacggacca aggagtctaa cacgtgcgcg agtcgggggc tcgcacgaaa gccgcgctgg 60
cgcaatgaag gtgaaggccg gcgcgctcgc cgcccgaggt gggatcccga ggcctctcca 120
gtccgcccag ggcgaccac cggcccgtct cgcccgccgc gccggggagg tggagcacga 180
gcgcacgtgt taggaccoga aagatggtga actatgcctg gccagggcga agccagagga 240
aactctggtg gaggtccgta gcggtcctga cgtgcaaata ggtcgtccga cctgggtata 300
ggggcgggct ccaggcgagg cggtcgacgc tcctgaaaac ttgcgcgcgc gctcgcgcca 360
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gcttgtgctg ccatgtccgc accggcaaca tcctgctcgg cgtctggtat ctgatcatca 480
atgctgtggt actggttgatt ttattgagtg ccctggctga tccggatcag tataactttt 540
caagttctga actgggaggt gactttgagt tcatggatga tgccaacatg tgcattgcca 600
ttgcgatttc tcttctcatg atcctgatgt gtgctatggc tacttacgga gcgtacaagc 660
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tgttggttgc aatcactgtg cttatttatc caaactccat tcaggaatac atacggcaac 780
tgctctctaa ttttcctac agagatgatg tcatgtcagt gaatcctacc tgtttggtcc 840
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aacaaggttt gccacaaaa aaaaaa 2186

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<210> 175

<211> 283

<212> PRT

<213> Homo sapiens

<400> 175

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Met Val Asn Tyr Ala Trp Ala Gly Arg Ser Gln Arg Lys Leu Trp Trp
 1          5          10          15
Arg Ser Val Ala Val Leu Thr Cys Lys Ser Val Val Arg Pro Gly Tyr
 20          25          30
Arg Gly Gly Leu Gln Ala Arg Arg Ser Thr Leu Leu Lys Thr Cys Ala
 35          40          45
Arg Ala Arg Ala Thr Ala Pro Gly Ala Met Lys Met Val Ala Pro Trp
 50          55          60
Thr Arg Phe Tyr Ser Asn Ser Cys Cys Leu Cys Cys His Val Arg Thr
 65          70          75          80
Gly Thr Ile Leu Leu Gly Val Trp Tyr Leu Ile Ile Asn Ala Val Val
 85          90          95
Leu Leu Ile Leu Leu Ser Ala Leu Ala Asp Pro Asp Gln Tyr Asn Phe
100          105          110
Ser Ser Ser Glu Leu Gly Gly Asp Phe Glu Phe Met Asp Asp Ala Asn
115          120          125
Met Cys Ile Ala Ile Ala Ile Ser Leu Leu Met Ile Leu Ile Cys Ala
130          135          140
Met Ala Thr Tyr Gly Ala Tyr Lys Gln Arg Ala Ala Trp Ile Ile Pro
145          150          155          160
Phe Phe Cys Tyr Gln Ile Phe Asp Phe Ala Leu Asn Met Leu Val Ala
165          170          175
Ile Thr Val Leu Ile Tyr Pro Asn Ser Ile Gln Glu Tyr Ile Arg Gln
180          185          190
Leu Pro Pro Asn Phe Pro Tyr Arg Asp Asp Val Met Ser Val Asn Pro
195          200          205
Thr Cys Leu Val Leu Ile Ile Leu Leu Phe Ile Ser Ile Ile Leu Thr
210          215          220
Phe Lys Gly Tyr Leu Ile Ser Cys Val Trp Asn Cys Tyr Arg Tyr Ile

```

187

225		230		235		240
Asn Gly Arg Asn Ser Ser Asp Val Leu Val Tyr Val Thr Ser Asn Asp						
	245		250		255	
Thr Thr Val Leu Leu Pro Pro Tyr Asp Asp Ala Thr Val Asn Gly Ala						
	260		265		270	
Ala Lys Glu Pro Pro Pro Pro Tyr Val Ser Ala						
	275		280			

<210> 176
 <211> 597
 <212> DNA
 <213> Homo sapiens

<400> 176
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 aacttccagg acaaccaatt ccaggggaag tggatatgtg taggcctggc agggaaatgca 180
 attctcagag aagacaaaag ccgcgaaaag atgtatgcca ccatctatga gctgaaagaa 240
 gacaagagct acaatgtcac ctccgtcctg tttaggaaaa agaagtgtga ctactggatc 300
 aggacttttg ttccagggtg ccagcccggc gagttcacgc tgggcaacat taagagttac 360
 cctggattaa cgagttacct cgtccgagtg gtgagcacca actacaacca gcatgctatg 420
 gtgttcttca agaaagtctc tcaaaacagg gagtacttca agatcacctc ctacgggaga 480
 accaaggagc tgacttcgga actaaaggag aacttcatcc gcttctccaa atatctgggc 540
 ctccctgaaa accacatcgt ctccctgtgc ccaatcgacc agtgtatcga cggtcga 597

<210> 177
 <211> 198
 <212> PRT
 <213> Homo sapiens

<400> 177
 Met Pro Leu Gly Leu Leu Trp Leu Gly Leu Ala Leu Leu Gly Ala Leu
 1 5 10 15
 His Ala Gln Ala Gln Asp Ser Thr Ser Asp Leu Ile Pro Ala Pro Pro
 20 25 30
 Leu Ser Lys Val Pro Leu Gln Gln Asn Phe Gln Asp Asn Gln Phe Gln
 35 40 45
 Gly Lys Trp Tyr Val Val Gly Leu Ala Gly Asn Ala Ile Leu Arg Glu
 50 55 60
 Asp Lys Asp Pro Gln Lys Met Tyr Ala Thr Ile Tyr Glu Leu Lys Glu
 65 70 75 80
 Asp Lys Ser Tyr Asn Val Thr Ser Val Leu Phe Arg Lys Lys Lys Cys
 85 90 95
 Asp Tyr Trp Ile Arg Thr Phe Val Pro Gly Cys Gln Pro Gly Glu Phe
 100 105 110
 Thr Leu Gly Asn Ile Lys Ser Tyr Pro Gly Leu Thr Ser Tyr Leu Val
 115 120 125
 Arg Val Val Ser Thr Asn Tyr Asn Gln His Ala Met Val Phe Phe Lys
 130 135 140
 Lys Val Ser Gln Asn Arg Glu Tyr Phe Lys Ile Thr Leu Tyr Gly Arg
 145 150 155 160
 Thr Lys Glu Leu Thr Ser Glu Leu Lys Glu Asn Phe Ile Arg Phe Ser
 165 170 175
 Lys Tyr Leu Gly Leu Pro Glu Asn His Ile Val Phe Pro Val Pro Ile
 180 185 190
 Asp Gln Cys Ile Asp Gly
 195

<210> 178
 <211> 1518
 <212> DNA
 <213> Homo sapiens

<400> 178
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 ccccggggcc gccctgaccg gggagcagct cctgggcagc ctgctgcggc agctgcagct 180
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 gagggccagc tacgtggccc tgctgcagcg cagccacggg gaccgctccc gcggaaagag 300
 gttcagccag agcttccag aggtggccgg caggttcctg gcgttgagg ccagcacaca 360
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 gctgcggctc ttccaggagc cggccccaa ggccgcgctg cacaggcacg ggcggctgtc 480
 cccgcgcagc gcccgggccc gggtgaccgt cgagtggctg cgcgtcccg acgacggctc 540
 caaccgcacc tccctcatcg actccaggct ggtgtccgtc cagcagagcg gctggaaggc 600
 cttcgacgtg accgaggccg tgaacttctg gcagcagctg agccggcccc ggcagccgt 660
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 gcacaccctg gaccttgggg actatggagc tcagggcgac tgtgaccctg aagcaccaat 840
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 ggccgagaa c tgggtgctgg agccccggg cttcctggct tatgagtgtg tgggcacctg 960
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<210> 179
 <211> 366
 <212> PRT
 <213> Homo sapiens

<400> 179
 Met Gln Pro Leu Trp Leu Cys Trp Ala Leu Trp Val Leu Pro Leu Ala
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 Ser Pro Gly Ala Ala Leu Thr Gly Glu Gln Leu Leu Gly Ser Leu Leu
 20 25 30
 Arg Gln Leu Gln Leu Lys Glu Val Pro Thr Leu Asp Arg Ala Asp Met
 35 40 45
 Glu Glu Leu Val Ile Pro Thr His Val Arg Ala Gln Tyr Val Ala Leu
 50 55 60
 Leu Gln Arg Ser His Gly Asp Arg Ser Arg Gly Lys Arg Phe Ser Gln
 65 70 75 80
 Ser Phe Arg Glu Val Ala Gly Arg Phe Leu Ala Leu Glu Ala Ser Thr
 85 90 95
 His Leu Leu Val Phe Gly Met Glu Gln Arg Leu Pro Pro Asn Ser Glu
 100 105 110
 Leu Val Gln Ala Val Leu Arg Leu Phe Gln Glu Pro Val Pro Lys Ala
 115 120 125
 Ala Leu His Arg His Gly Arg Leu Ser Pro Arg Ser Ala Arg Ala Arg

189

130		135		140
Val Thr Val Glu Trp Leu Arg Val Arg Asp Asp Gly Ser Asn Arg Thr				
145		150		155
Ser Leu Ile Asp Ser Arg Leu Val Ser Val His Glu Ser Gly Trp Lys				160
		165		170
Ala Phe Asp Val Thr Glu Ala Val Asn Phe Trp Gln Gln Leu Ser Arg				175
		180		185
Pro Arg Gln Pro Leu Leu Leu Gln Val Ser Val Gln Arg Glu His Leu				190
		195		200
Gly Pro Leu Ala Ser Gly Ala His Lys Leu Val Arg Phe Ala Ser Gln				205
		210		215
Gly Ala Pro Ala Gly Leu Gly Glu Pro Gln Leu Glu Leu His Thr Leu				220
225		230		235
Asp Leu Gly Asp Tyr Gly Ala Gln Gly Asp Cys Asp Pro Glu Ala Pro				240
		245		250
Met Thr Glu Gly Thr Arg Cys Cys Arg Gln Glu Met Tyr Ile Asp Leu				255
		260		265
Gln Gly Met Lys Trp Ala Glu Asn Trp Val Leu Glu Pro Pro Gly Phe				270
		275		280
Leu Ala Tyr Glu Cys Val Gly Thr Cys Arg Gln Pro Pro Glu Ala Leu				285
		290		295
Ala Phe Lys Trp Pro Phe Leu Gly Pro Arg Gln Cys Ile Ala Ser Glu				300
305		310		315
Thr Asp Ser Leu Pro Met Ile Val Ser Ile Lys Glu Gly Gly Arg Thr				320
		325		330
Arg Pro Gln Val Ser Leu Pro Asn Met Arg Val Gln Lys Cys Ser				335
		340		345
Cys Ala Ser Asp Gly Ala Leu Val Pro Arg Arg Leu Gln Pro				350
		355		360
				365

<210> 180

<211> 444

<212> DNA

<213> Homo sapiens

<400> 180

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aatgccgagt tctgccagc tcttggttct gagctgtagg acttcttctt cattagtgaa 180
cctctgttca agttaagtct tgccaaattt gatgcccttc cggaagctgt tgcagccaag 240
ttaggagtga agagatgcac ggatcagatg tcccttcaga aacgaagcct cattgcggaa 300
gtcctgggtga aaatattgaa gaaatgtagt gtgtgacatg taaaaacttt catcctggtt 360
tccactgtct ttcaatgaca ccctgatctt cactgcagaa tgtaaagggtt tcaacgtctt 420
gctttaataa atcacttget ctac                                     444

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<210> 181

<211> 90

<212> PRT

<213> Homo sapiens

<400> 181

Met Lys Leu Ser Val Cys Leu Leu Leu Val Thr Leu Ala Leu Cys Cys
1 5 10 15
Tyr Gln Ala Asn Ala Glu Phe Cys Pro Ala Leu Val Ser Glu Leu Leu
20 25 30
Asp Phe Phe Phe Ile Ser Glu Pro Leu Phe Lys Leu Ser Leu Ala Lys
35 40 45

190

Phe Asp Ala Pro Pro Glu Ala Val Ala Ala Lys Leu Gly Val Lys Arg
 50 55 60
 Cys Thr Asp Gln Met Ser Leu Gln Lys Arg Ser Leu Ile Ala Glu Val
 65 70 75 80
 Leu Val Lys Ile Leu Lys Lys Cys Ser Val
 85 90

<210> 182
 <211> 754
 <212> DNA
 <213> Homo sapiens

<400> 182
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 aggaaagcat aggaggtttg aaatggaccg ggaacctaa agtgccagat actgtgctga 180
 gtgtaatagg ctgcatcctg ctgaggaagg agacttttgg gcagagtcaa gcatgttggg 240
 cctcaagatc acctactttg cactgatgga tggaaagggtg tatgacatca cagagtgggc 300
 tggatgccag cgtgtaggta tctccccaga taccacacaga gtcccctatc acatctcatt 360
 tggttctcgg attccaggca ccagagggcg gcagagagcc accccagatg cccctcctgc 420
 tgatcttcag gatttcttga gtccgatctt tcaagtaccc ccagggcaga tgccaatggg 480
 aacttctttg cagctcctca gctgcccct ggagccgctg cagcctctaa gcccacagc 540
 acagtaccca agggagaagc caaacctaag cggcgaaga aagtgaggag gcccttccaa 600
 cgttgatgcc ccttctcttt cctcaaata atgtcagggg gtcaaaaggg ctgtagcaca 660
 ggatggagtt tgatttatcc ctctccccc aacacctagg aactgaatct ttttcttttt 720
 attttttgag atggagtctt gctctgttgc ccag 754

<210> 183
 <211> 191
 <212> PRT
 <213> Homo sapiens

<400> 183
 Met Lys Arg Met Ala Glu Asn Glu Leu Ser Arg Ser Val Asn Glu Phe
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 Leu Ser Lys Leu Gln Asp Asp Leu Lys Glu Ala Met Asn Thr Met Met
 20 25 30
 Cys Ser Arg Cys Gln Gly Lys His Arg Arg Phe Glu Met Asp Arg Glu
 35 40 45
 Pro Lys Ser Ala Arg Tyr Cys Ala Glu Cys Asn Arg Leu His Pro Ala
 50 55 60
 Glu Glu Gly Asp Phe Trp Ala Glu Ser Ser Met Leu Gly Leu Lys Ile
 65 70 75 80
 Thr Tyr Phe Ala Leu Met Asp Gly Lys Val Tyr Asp Ile Thr Glu Trp
 85 90 95
 Ala Gly Cys Gln Arg Val Gly Ile Ser Pro Asp Thr His Arg Val Pro
 100 105 110
 Tyr His Ile Ser Phe Gly Ser Arg Ile Pro Gly Thr Arg Gly Arg Gln
 115 120 125
 Arg Ala Thr Pro Asp Ala Pro Pro Ala Asp Leu Gln Asp Phe Leu Ser
 130 135 140
 Arg Ile Phe Gln Val Pro Pro Gly Gln Met Pro Met Gly Thr Ser Leu
 145 150 155 160
 Gln Leu Leu Ser Leu Pro Leu Glu Pro Leu Gln Pro Leu Ser Pro Thr
 165 170 175
 Ala Gln Tyr Pro Arg Glu Lys Pro Asn Leu Ser Gly Gly Arg Lys
 180 185 190

<210> 184
<211> 2511
<212> DNA
<213> Homo sapiens

<400> 184
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tgaaccacgg gcctcctctg cactcgcctc agtaccgcga cacagctcat accaacgcca 240
tggcccccag catgggctcc tctgtcaatg acgcttttaa gagagataaa gatgccattt 300
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aagatatagc cgtgttcgcc aaacagattc gcgcagaaaa acctctattt tcttctaata 480
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<210> 185
<211> 390
<212> PRT
<213> Homo sapiens

<400> 185
Met Ala Gln Arg Tyr Asp Asp Leu Pro His Tyr Gly Gly Met Asp Gly

192

1	5	10	15
Val Gly Ile Pro Ser Thr Met Tyr Gly Asp Pro His Ala Ala Arg Ser			
20	25	30	
Met Gln Pro Val His His Leu Asn His Gly Pro Pro Leu His Ser His			
35	40	45	
Gln Tyr Pro His Thr Ala His Thr Asn Ala Met Ala Pro Ser Met Gly			
50	55	60	
Ser Ser Val Asn Asp Ala Leu Lys Arg Asp Lys Asp Ala Ile Tyr Gly			
65	70	75	80
His Pro Leu Phe Pro Leu Leu Ala Leu Ile Phe Glu Lys Cys Glu Leu			
85	90	95	
Ala Thr Cys Thr Pro Arg Glu Pro Gly Val Ala Gly Gly Asp Val Cys			
100	105	110	
Ser Ser Glu Ser Phe Asn Glu Asp Ile Ala Val Phe Ala Lys Gln Ile			
115	120	125	
Arg Ala Glu Lys Pro Leu Phe Ser Ser Asn Pro Glu Leu Asp Asn Leu			
130	135	140	
Met Ile Gln Ala Ile Gln Val Leu Arg Phe His Leu Leu Glu Leu Glu			
145	150	155	160
Lys Val His Glu Leu Cys Asp Asn Phe Cys His Arg Tyr Ile Ser Cys			
165	170	175	
Leu Lys Gly Lys Met Pro Ile Asp Leu Val Ile Asp Asp Arg Glu Gly			
180	185	190	
Gly Ser Lys Ser Asp Ser Glu Asp Ile Thr Arg Ser Ala Asn Leu Thr			
195	200	205	
Asp Gln Pro Ser Trp Asn Arg Asp His Asp Asp Thr Ala Ser Thr Arg			
210	215	220	
Ser Gly Gly Thr Pro Gly Pro Ser Ser Gly Gly His Thr Ser His Ser			
225	230	235	240
Gly Asp Asn Ser Ser Glu Gln Gly Asp Gly Leu Asp Asn Ser Val Ala			
245	250	255	
Ser Pro Ser Thr Gly Asp Asp Asp Asp Pro Asp Lys Asp Lys Lys Arg			
260	265	270	
His Lys Lys Arg Gly Ile Phe Pro Lys Val Ala Thr Asn Ile Met Arg			
275	280	285	
Ala Trp Leu Phe Gln His Leu Thr His Pro Tyr Pro Ser Glu Glu Gln			
290	295	300	
Lys Lys Gln Leu Ala Gln Asp Thr Gly Leu Thr Ile Leu Gln Val Asn			
305	310	315	320
Asn Trp Phe Ile Asn Ala Arg Arg Arg Ile Val Gln Pro Met Ile Asp			
325	330	335	
Gln Ser Asn Arg Ala Val Ser Gln Gly Thr Pro Tyr Asn Pro Asp Gly			
340	345	350	
Gln Pro Met Gly Gly Phe Val Met Asp Gly Gln Gln His Met Gly Ile			
355	360	365	
Arg Ala Pro Gly Pro Met Ser Gly Met Gly Met Asn Met Gly Met Glu			
370	375	380	
Gly Gln Trp His Tyr Met			
385	390		

<210> 186

<211> 517

<212> DNA

<213> Homo sapiens

<400> 186

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193

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acctgaatac aaagagcttc ttcaagagtt catagacagt gatgccgctg cagaggctat 240
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gatgatgcat acagtgtacg acagcatttg gtgtaatatg aagagtaatt aactttaccc 360
aaggcgtttg gctcagaggg ctacagacta tggccagaac tcatctgttg attgctagaa 420
accacttttc tttcttgtgt tgtcttttta tgtggaaact gctagacaac tgttgaaacc 480
tcaaattcat ttccatttca ataactaact gcaaatc 517

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<210> 187

<211> 95

<212> PRT

<213> Homo sapiens

<400> 187

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Met Lys Leu Leu Met Val Leu Met Leu Ala Ala Leu Leu Leu His Cys
1      5      10      15
Tyr Ala Asp Ser Gly Cys Lys Leu Leu Glu Asp Met Val Glu Lys Thr
      20      25      30
Ile Asn Ser Asp Ile Ser Ile Pro Glu Tyr Lys Glu Leu Leu Gln Glu
      35      40      45
Phe Ile Asp Ser Asp Ala Ala Ala Glu Ala Met Gly Lys Phe Lys Gln
      50      55      60
Cys Phe Leu Asn Gln Ser His Arg Thr Leu Lys Asn Phe Gly Leu Met
      65      70      75      80
Met His Thr Val Tyr Asp Ser Ile Trp Cys Asn Met Lys Ser Asn
      85      90      95

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<210> 188

<211> 2048

<212> DNA

<213> Homo sapiens

<400> 188

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aaaagtggcc ccggacgcgc gagcctgagg attctgcaca aaagaggtgc ccaaaatgaa 180
gacctgatg cgccatggtc tggcagtgtg tttagcgctc accaccatgt gcaccagctt 240
gttgctagtg tacagcagcc tcggcggcca gaaggagcgg ccccccgcagc agcagcagca 300
gcagcagcaa cagcagcagc aggcgtcggc caccggcagc tcgcagccgg cggcggagag 360
cagcaccacg cagcgcgccg gggtccccgc gggaccgcgg cactggacg gatacctcg 420
agtggcggac cacaagccc tgaaaatgca ctgcaggac tgtgccctg tgaccagctc 480
aggcatctg ctgcacagtc ggcaaggctc ccgattgac cagacagagt gtgtcatccg 540
catgaatgac gccccacac gcggtatagg gcgtgacgtg ggcaatcgca ccagcctgag 600
ggtcatcgcg cattccagca tccagaggat cctccgcaac cgccatgacc tgctcaacgt 660
gagccagggc accgtgttca tcttctgggg cccagcagc tacatgcggc gggacggcaa 720
gggcagggtc tacaacaacc tgcattctct gagccagggt ctgccccggc tgaaggcctt 780
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cagacaggaa agggtagcag aaaacagctt cactcctcag gaagtaccat ggacagacgc 1320
ctaccagggg tgacaaagca gtgcagttgg attgtaaggaa aaaattccgg aattaatgca 1380

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tcctaataagaa tgggtgtcccc ttcaatgggtg ttacccttagg agctgaacat tcaattcagt 1440
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aagcaactca acaatattag ttgcattcct ttatagacat accatgtcaa agacgttttt 1560
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aaaaaaaaa 2048

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<210> 189

<211> 336

<212> PRT

<213> Homo sapiens

<400> 189

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Met Lys Thr Leu Met Arg His Gly Leu Ala Val Cys Leu Ala Leu Thr
 1           5           10           15
Thr Met Cys Thr Ser Leu Leu Leu Val Tyr Ser Ser Leu Gly Gly Gln
      20           25           30
Lys Glu Arg Pro Pro Gln Gln Gln Gln Gln Gln Gln Gln Gln
      35           40           45
Gln Ala Ser Ala Thr Gly Ser Ser Gln Pro Ala Ala Glu Ser Ser Thr
      50           55           60
Gln Gln Arg Pro Gly Val Pro Ala Gly Pro Arg Pro Leu Asp Gly Tyr
      65           70           75           80
Leu Gly Val Ala Asp His Lys Pro Leu Lys Met His Cys Arg Asp Cys
      85           90           95
Ala Leu Val Thr Ser Ser Gly His Leu Leu His Ser Arg Gln Gly Ser
      100          105          110
Gln Ile Asp Gln Thr Glu Cys Val Ile Arg Met Asn Asp Ala Pro Thr
      115          120          125
Arg Gly Tyr Gly Arg Asp Val Gly Asn Arg Thr Ser Leu Arg Val Ile
      130          135          140
Ala His Ser Ser Ile Gln Arg Ile Leu Arg Asn Arg His Asp Leu Leu
      145          150          155          160
Asn Val Ser Gln Gly Thr Val Phe Ile Phe Trp Gly Pro Ser Ser Tyr
      165          170          175
Met Arg Arg Asp Gly Lys Gly Gln Val Tyr Asn Asn Leu His Leu Leu
      180          185          190
Ser Gln Val Leu Pro Arg Leu Lys Ala Phe Met Ile Thr Arg His Lys
      195          200          205
Met Leu Gln Phe Asp Glu Leu Phe Lys Gln Glu Thr Gly Lys Asp Arg
      210          215          220
Lys Ile Ser Asn Thr Trp Leu Ser Thr Gly Trp Phe Thr Met Thr Ile
      225          230          235          240
Ala Leu Glu Leu Cys Asp Arg Ile Asn Val Tyr Gly Met Val Pro Pro
      245          250          255
Asp Phe Cys Arg Asp Pro Asn His Pro Ser Val Pro Tyr His Tyr Tyr
      260          265          270
Glu Pro Phe Gly Pro Asp Glu Cys Thr Met Tyr Leu Ser His Glu Arg
      275          280          285
Gly Arg Lys Gly Ser His His Arg Phe Ile Thr Glu Lys Arg Val Phe
      290          295          300
Lys Asn Trp Ala Arg Thr Phe Asn Ile His Phe Phe Gln Pro Asp Trp

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195

305 310 315 320
 Lys Pro Glu Ser Leu Ala Ile Asn His Pro Glu Asn Lys Pro Val Phe
 325 330 335

<210> 190
 <211> 1078
 <212> DNA
 <213> Homo sapiens

<400> 190
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<210> 191
 <211> 267
 <212> PRT
 <213> Homo sapiens

<400> 191
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 35 40 45
 Thr Lys Asn Ala Asn Ser Leu Glu Ala Lys Leu Lys Glu Met Gln Lys
 50 55 60
 Phe Phe Gly Leu Pro Ile Thr Gly Met Leu Asn Ser Arg Val Ile Glu
 65 70 75 80
 Ile Met Gln Lys Pro Arg Cys Gly Val Pro Asp Val Ala Glu Tyr Ser
 85 90 95
 Leu Phe Pro Asn Ser Pro Lys Trp Thr Ser Lys Val Val Thr Tyr Arg
 100 105 110
 Ile Val Ser Tyr Thr Arg Asp Leu Pro His Ile Thr Val Asp Arg Leu
 115 120 125
 Val Ser Lys Ala Leu Asn Met Trp Gly Lys Glu Ile Pro Leu His Phe
 130 135 140
 Arg Lys Val Val Trp Gly Thr Ala Asp Ile Met Ile Gly Phe Ala Arg
 145 150 155 160
 Gly Ala His Gly Asp Ser Tyr Pro Phe Asp Gly Pro Gly Asn Thr Leu
 165 170 175

196

Ala His Ala Phe Ala Pro Gly Thr Gly Leu Gly Gly Asp Ala His Phe
 180 185 190
 Asp Glu Asp Glu Arg Trp Thr Asp Gly Ser Ser Leu Gly Ile Asn Phe
 195 200 205
 Leu Tyr Ala Ala Thr His Glu Leu Gly His Ser Leu Gly Met Gly His
 210 215 220
 Ser Ser Asp Pro Asn Ala Val Met Tyr Pro Thr Tyr Gly Asn Gly Asp
 225 230 235 240
 Pro Gln Asn Phe Lys Leu Ser Gln Asp Asp Ile Lys Gly Ile Gln Lys
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 Leu Tyr Gly Lys Arg Ser Asn Ser Arg Lys Lys
 260 265

<210> 192

<211> 2217

<212> DNA

<213> Homo sapiens

<400> 192

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tctgttgga ccccgccct cggcagcctc ctgttcctgc tcttcagcct cggatgggtg 180
cagccctcga ggacctggc tggagagaca gggcaggagg ctgcacccct ggacggagtc 240
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aagaatgtca agctctcaac agagcagctg cgtgtctgg ctaccggct ctctgagccc 420
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197

<210> 193
 <211> 702
 <212> PRT
 <213> Homo sapiens

<400> 193

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Ala Leu Gly Ser Leu Leu Phe Leu Leu Phe Ser Leu Gly Trp Val Gln
          20          25          30
Pro Ser Arg Thr Leu Ala Gly Glu Thr Gly Gln Glu Ala Ala Pro Leu
          35          40          45
Asp Gly Val Leu Ala Asn Pro Pro Asn Ile Ser Ser Leu Ser Pro Arg
          50          55          60
Gln Leu Leu Gly Phe Pro Cys Ala Glu Val Ser Gly Leu Ser Thr Glu
          65          70          75          80
Arg Val Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu
          85          90          95
Ser Thr Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro
          100          105          110
Glu Asp Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro
          115          120          125
Asp Ala Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile
          130          135          140
Thr Lys Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln
          145          150          155          160
Arg Leu Leu Pro Ala Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu
          165          170          175
Leu Ser Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu
          180          185          190
Pro Gly Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu
          195          200          205
Val Ser Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg
          210          215          220
Ala Ala Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp
          225          230          235          240
Ser Val Ser Thr Met Asp Ala Leu Arg Gly Leu Leu Pro Val Leu Gly
          245          250          255
Gln Pro Ile Ile Arg Ser Ile Pro Gln Gly Ile Val Ala Ala Trp Arg
          260          265          270
Gln Arg Ser Ser Arg Asp Pro Ser Trp Arg Gln Pro Glu Arg Thr Ile
          275          280          285
Leu Arg Pro Arg Phe Arg Arg Glu Val Glu Lys Thr Ala Cys Pro Ser
          290          295          300
Gly Lys Lys Ala Arg Glu Ile Asp Glu Ser Leu Ile Phe Tyr Lys Lys
          305          310          315          320
Trp Glu Leu Glu Ala Cys Val Asp Ala Ala Leu Leu Ala Thr Gln Met
          325          330          335
Asp Arg Val Asn Ala Ile Pro Phe Thr Tyr Glu Gln Leu Asp Val Leu
          340          345          350
Lys His Lys Leu Asp Glu Leu Tyr Pro Gln Gly Tyr Pro Glu Ser Val
          355          360          365
Ile Gln His Leu Gly Tyr Leu Phe Leu Lys Met Ser Pro Glu Asp Ile
          370          375          380
Arg Lys Trp Asn Val Thr Ser Leu Glu Thr Leu Lys Ala Leu Leu Glu
          385          390          395          400
Val Asn Lys Gly His Glu Met Ser Pro Gln Ala Pro Arg Arg Pro Leu
          405          410          415

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Pro Gln Val Ala Thr Leu Ile Asp Arg Phe Val Lys Gly Arg Gly Gln
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 Leu Asp Lys Asp Thr Leu Asp Thr Leu Thr Ala Phe Tyr Pro Gly Tyr
 435 440 445
 Leu Cys Ser Leu Ser Pro Glu Glu Leu Ser Ser Val Pro Pro Ser Ser
 450 455 460
 Ile Trp Ala Val Arg Pro Gln Asp Leu Asp Thr Cys Asp Pro Arg Gln
 465 470 475 480
 Leu Asp Val Leu Tyr Pro Lys Ala Arg Leu Ala Phe Gln Asn Met Asn
 485 490 495
 Gly Ser Glu Tyr Phe Val Lys Ile Gln Ser Phe Leu Gly Gly Ala Pro
 500 505 510
 Thr Glu Asp Leu Lys Ala Leu Ser Gln Gln Asn Val Ser Met Asp Leu
 515 520 525
 Ala Thr Phe Met Lys Leu Arg Thr Asp Ala Val Leu Pro Leu Thr Val
 530 535 540
 Ala Glu Val Gln Lys Leu Leu Gly Pro His Val Glu Gly Leu Lys Ala
 545 550 555 560
 Glu Glu Arg His Arg Pro Val Arg Asp Trp Ile Leu Arg Gln Arg Gln
 565 570 575
 Asp Asp Leu Asp Thr Leu Gly Leu Gly Leu Gln Gly Gly Ile Pro Asn
 580 585 590
 Gly Tyr Leu Val Leu Asp Leu Ser Val Gln Gly Gly Arg Gly Gly Gln
 595 600 605
 Ala Arg Ala Gly Gly Arg Ala Gly Gly Val Glu Val Gly Ala Leu Ser
 610 615 620
 His Pro Ser Leu Cys Arg Gly Pro Leu Gly Asp Ala Leu Pro Pro Arg
 625 630 635 640
 Thr Trp Thr Cys Ser His Arg Pro Gly Thr Ala Pro Ser Leu His Pro
 645 650 655
 Gly Leu Arg Ala Pro Leu Pro Cys Trp Pro Gln Pro Cys Trp Gly Ser
 660 665 670
 Pro Pro Gly Gln Glu Gln Ala Arg Val Ile Pro Val Pro Pro Gln Glu
 675 680 685
 Asn Ser Arg Ser Val Asn Gly Asn Met Pro Pro Ala Asp Thr
 690 695 700

<210> 194

<211> 2135

<212> DNA

<213> Homo sapiens

<400> 194

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 tctgttggga ccccgccct cggcagcctc ctgttctctgc tcttcagcct cggatgggtg 180
 cagccctcga ggaccctggc tggagagaca gggcaggagg ctgcaccctt ggacggagtc 240
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 ccccctacg gcccccgctc gacatggtct gtctccacga tggacgtctt gcggggcctg 840

199

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ctgcccgtgc tgggccagcc catcatccgc agcatcccgc agggcatcgt ggccgcgtgg 900
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<210> 195

<211> 630

<212> PRT

<213> Homo sapiens

<400> 195

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          20          25          30
Pro Ser Arg Thr Leu Ala Gly Glu Thr Gly Gln Glu Ala Ala Pro Leu
          35          40          45
Asp Gly Val Leu Ala Asn Pro Pro Asn Ile Ser Ser Leu Ser Pro Arg
          50          55          60
Gln Leu Leu Gly Phe Pro Cys Ala Glu Val Ser Gly Leu Ser Thr Glu
          65          70          75          80
Arg Val Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu
          85          90          95
Ser Thr Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro
          100          105          110
Glu Asp Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro
          115          120          125
Asp Ala Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile
          130          135          140
Thr Lys Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln
          145          150          155          160
Arg Leu Leu Pro Ala Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu
          165          170          175
Leu Ser Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu
          180          185          190
Pro Gly Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu
          195          200          205
Val Ser Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg
          210          215          220
Ala Ala Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp

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200

225					230					235				240
Ser	Val	Ser	Thr	Met	Asp	Ala	Leu	Arg	Gly	Leu	Leu	Pro	Val	Leu
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			260					265					270	
Gln	Arg	Ser	Ser	Arg	Asp	Pro	Ser	Trp	Arg	Gln	Pro	Glu	Arg	Thr
		275					280					285		
Leu	Arg	Pro	Arg	Phe	Arg	Arg	Glu	Val	Glu	Lys	Thr	Ala	Cys	Pro
	290					295					300			
Gly	Lys	Lys	Ala	Arg	Glu	Ile	Asp	Glu	Ser	Leu	Ile	Phe	Tyr	Lys
305					310					315				320
Trp	Glu	Leu	Glu	Ala	Cys	Val	Asp	Ala	Ala	Leu	Leu	Ala	Thr	Gln
				325				330						335
Asp	Arg	Val	Asn	Ala	Ile	Pro	Phe	Thr	Tyr	Glu	Gln	Leu	Asp	Val
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Lys	His	Lys	Leu	Asp	Glu	Leu	Tyr	Pro	Gln	Gly	Tyr	Pro	Glu	Ser
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Ile	Gln	His	Leu	Gly	Tyr	Leu	Phe	Leu	Lys	Met	Ser	Pro	Glu	Asp
	370					375					380			
Arg	Lys	Trp	Asn	Val	Thr	Ser	Leu	Glu	Thr	Leu	Lys	Ala	Leu	Glu
385					390					395				400
Val	Asn	Lys	Gly	His	Glu	Met	Ser	Pro	Gln	Ala	Pro	Arg	Arg	Pro
				405					410					415
Pro	Gln	Val	Ala	Thr	Leu	Ile	Asp	Arg	Phe	Val	Lys	Gly	Arg	Gly
		420						425					430	
Leu	Asp	Lys	Asp	Thr	Leu	Asp	Thr	Leu	Thr	Ala	Phe	Tyr	Pro	Gly
	435						440					445		
Leu	Cys	Ser	Leu	Ser	Pro	Glu	Glu	Leu	Ser	Ser	Val	Pro	Pro	Ser
	450					455					460			
Ile	Trp	Ala	Val	Arg	Pro	Gln	Asp	Leu	Asp	Thr	Cys	Asp	Pro	Arg
465					470					475				480
Leu	Asp	Val	Leu	Tyr	Pro	Lys	Ala	Arg	Leu	Ala	Phe	Gln	Asn	Met
			485						490					495
Gly	Ser	Glu	Tyr	Phe	Val	Lys	Ile	Gln	Ser	Phe	Leu	Gly	Gly	Ala
		500						505					510	
Thr	Glu	Asp	Leu	Lys	Ala	Leu	Ser	Gln	Gln	Asn	Val	Ser	Met	Asp
	515						520					525		
Ala	Thr	Phe	Met	Lys	Leu	Arg	Thr	Asp	Ala	Val	Leu	Pro	Leu	Thr
	530					535					540			
Ala	Glu	Val	Gln	Lys	Leu	Leu	Gly	Pro	His	Val	Glu	Gly	Leu	Lys
545					550					555				560
Glu	Glu	Arg	His	Arg	Pro	Val	Arg	Asp	Trp	Ile	Leu	Arg	Gln	Arg
			565						570					575
Asp	Asp	Leu	Asp	Thr	Leu	Gly	Leu	Gly	Leu	Gln	Gly	Gly	Ile	Pro
		580					585						590	
Gly	Tyr	Leu	Val	Leu	Asp	Leu	Ser	Val	Gln	Glu	Ala	Leu	Ser	Gly
	595					600						605		
Pro	Cys	Leu	Leu	Gly	Pro	Gly	Pro	Val	Leu	Thr	Val	Leu	Ala	Leu
	610					615					620			
Leu	Ala	Ser	Thr	Leu	Ala									
625					630									

<210> 196

<211> 2105

<212> DNA

<213> Homo sapiens

<400> 196

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tcctgtggga ccccgccct cggcagcctc ctgttctctg tcttcagcct cggatgggtg 180
cagccctcga ggaccttggc tggagagaca gggcaggagg ctgcacccct ggacggagtc 240
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gcgagggtgt ccggcctgag cacggagcgt gtccgggagc tggctgtggc cttggcacag 360
aagaatgtca agctctcaac agagcagctg cgtgtcttgg ctcccggtct ctctgagccc 420
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```

<210> 197

<211> 620

<212> PRT

<213> Homo sapiens

<400> 197

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Met Ala Leu Pro Thr Ala Arg Pro Leu Leu Gly Ser Cys Gly Thr Pro
1           5           10          15
Ala Leu Gly Ser Leu Leu Phe Leu Leu Phe Ser Leu Gly Trp Val Gln
20          25          30
Pro Ser Arg Thr Leu Ala Gly Glu Thr Gly Gln Glu Ala Ala Pro Leu
35          40          45
Asp Gly Val Leu Ala Asn Pro Pro Asn Ile Ser Ser Leu Ser Pro Arg
50          55          60
Gln Leu Leu Gly Phe Pro Cys Ala Glu Val Ser Gly Leu Ser Thr Glu
65          70          75          80
Arg Val Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu
85          90          95
Ser Thr Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro
100         105         110

```

202

Glu Asp Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro
 115 120 125
 Asp Ala Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile
 130 135 140
 Thr Lys Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln
 145 150 155 160
 Arg Leu Leu Pro Ala Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu
 165 170 175
 Leu Ser Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu
 180 185 190
 Pro Gly Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu
 195 200 205
 Val Ser Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg
 210 215 220
 Ala Ala Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp
 225 230 235 240
 Ser Val Ser Thr Met Asp Ala Leu Arg Gly Leu Leu Pro Val Leu Gly
 245 250 255
 Gln Pro Ile Ile Arg Ser Ile Pro Gln Gly Ile Val Ala Ala Trp Arg
 260 265 270
 Gln Arg Ser Ser Arg Asp Pro Ser Trp Arg Gln Pro Glu Arg Thr Ile
 275 280 285
 Leu Arg Pro Arg Phe Arg Arg Glu Val Glu Lys Thr Ala Cys Pro Ser
 290 295 300
 Gly Lys Lys Ala Arg Glu Ile Asp Glu Ser Leu Ile Phe Tyr Lys Lys
 305 310 315 320
 Trp Glu Leu Glu Ala Cys Val Asp Ala Ala Leu Leu Ala Thr Gln Met
 325 330 335
 Asp Arg Val Asn Ala Ile Pro Phe Thr Tyr Glu Gln Leu Asp Val Leu
 340 345 350
 Lys His Lys Leu Asp Glu Leu Tyr Pro Gln Gly Tyr Pro Glu Ser Val
 355 360 365
 Ile Gln His Leu Gly Tyr Leu Phe Leu Lys Met Ser Pro Glu Asp Ile
 370 375 380
 Arg Lys Trp Asn Val Thr Ser Leu Glu Thr Leu Lys Ala Leu Leu Glu
 385 390 395 400
 Val Asn Lys Gly His Glu Met Ser Pro Gln Ala Pro Arg Arg Pro Leu
 405 410 415
 Pro Gln Val Ala Thr Leu Ile Asp Arg Phe Val Lys Gly Arg Gly Gln
 420 425 430
 Leu Asp Lys Asp Thr Leu Asp Thr Leu Thr Ala Phe Tyr Pro Gly Tyr
 435 440 445
 Leu Cys Ser Leu Ser Pro Glu Leu Ser Ser Val Pro Pro Ser Ser
 450 455 460
 Ile Trp Ala Val Arg Pro Gln Asp Leu Asp Thr Cys Asp Pro Arg Gln
 465 470 475 480
 Leu Asp Val Leu Tyr Pro Lys Ala Arg Leu Ala Phe Gln Asn Met Asn
 485 490 495
 Gly Ser Glu Tyr Phe Val Lys Ile Gln Ser Phe Leu Gly Gly Ala Pro
 500 505 510
 Thr Glu Asp Leu Lys Ala Leu Ser Gln Gln Asn Val Ser Met Asp Leu
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 Ala Thr Phe Met Lys Leu Arg Thr Asp Ala Val Leu Pro Leu Thr Val
 530 535 540
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 545 550 555 560
 Glu Glu Arg His Arg Pro Val Arg Asp Trp Ile Leu Arg Gln Arg Gln
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<210> 198
<211> 2193
<212> DNA
<213> Homo sapiens
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<400> 198						
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cagccctcga	ggaccctggc	tggagagaca	gggcaggagg	ctgcacccct	ggacggagtc	240
ctggccaacc	cacctaacat	tccagcctc	tccccctgcc	aactccttgg	cttcccgtgt	300
cgggagggtg	cggccttag	acaggagcgt	gtccgggagc	tgcctgtggc	cttggcacag	360
aagaatgtca	agctctcaac	agagcagctg	cgtgtcttgg	ctcaccggct	ctctgagccc	420
cccgaggacc	tggacgcctt	cccatctggac	ctgctgctat	tcctcaaccc	agatgcgttc	480
toggggcccc	aggcctgcac	cgttttcttc	tccgcctca	cgaaggccaa	tgtggacctg	540
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cggttccggc	gggaagtgga	gaagacagcc	tgtccttcag	gcaagaaggc	cgcgagata	1020
gacgagagcc	tcattcttta	caagaagtgg	gagctggaag	cctgcgtgga	tgcggccctg	1080
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<210> 199
<211> 694
<212> PRT
<213> Homo sapiens
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<400> 199

204

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Ala	Leu	Gly	Ser	Leu	Leu	Phe	Leu	Leu	Phe	Ser	Leu	Gly	Trp	Val	Gln	20	25	30	
Pro	Ser	Arg	Thr	Leu	Ala	Gly	Glu	Thr	Gly	Gln	Glu	Ala	Ala	Pro	Leu	35	40	45	
Asp	Gly	Val	Leu	Ala	Asn	Pro	Pro	Asn	Ile	Ser	Ser	Leu	Ser	Pro	Arg	50	55	60	
Gln	Leu	Leu	Gly	Phe	Pro	Cys	Ala	Glu	Val	Ser	Gly	Leu	Ser	Thr	Glu	65	70	75	80
Arg	Val	Arg	Glu	Leu	Ala	Val	Ala	Leu	Ala	Gln	Lys	Asn	Val	Lys	Leu	85	90	95	
Ser	Thr	Glu	Gln	Leu	Arg	Cys	Leu	Ala	His	Arg	Leu	Ser	Glu	Pro	Pro	100	105	110	
Glu	Asp	Leu	Asp	Ala	Leu	Pro	Leu	Asp	Leu	Leu	Leu	Phe	Leu	Asn	Pro	115	120	125	
Asp	Ala	Phe	Ser	Gly	Pro	Gln	Ala	Cys	Thr	Arg	Phe	Phe	Ser	Arg	Ile	130	135	140	
Thr	Lys	Ala	Asn	Val	Asp	Leu	Leu	Pro	Arg	Gly	Ala	Pro	Glu	Arg	Gln	145	150	155	160
Arg	Leu	Leu	Pro	Ala	Ala	Leu	Ala	Cys	Trp	Gly	Val	Arg	Gly	Ser	Leu	165	170	175	
Leu	Ser	Glu	Ala	Asp	Val	Arg	Ala	Leu	Gly	Gly	Leu	Ala	Cys	Asp	Leu	180	185	190	
Pro	Gly	Arg	Phe	Val	Ala	Glu	Ser	Ala	Glu	Val	Leu	Leu	Pro	Arg	Leu	195	200	205	
Val	Ser	Cys	Pro	Gly	Pro	Leu	Asp	Gln	Asp	Gln	Gln	Glu	Ala	Ala	Arg	210	215	220	
Ala	Ala	Leu	Gln	Gly	Gly	Gly	Pro	Pro	Tyr	Gly	Pro	Pro	Ser	Thr	Trp	225	230	235	240
Ser	Val	Ser	Thr	Met	Asp	Ala	Leu	Arg	Gly	Leu	Leu	Pro	Val	Leu	Gly	245	250	255	
Gln	Pro	Ile	Ile	Arg	Ser	Ile	Pro	Gln	Gly	Ile	Val	Ala	Ala	Trp	Arg	260	265	270	
Gln	Arg	Ser	Ser	Arg	Asp	Pro	Ser	Trp	Arg	Gln	Pro	Glu	Arg	Thr	Ile	275	280	285	
Leu	Arg	Pro	Arg	Phe	Arg	Arg	Glu	Val	Glu	Lys	Thr	Ala	Cys	Pro	Ser	290	295	300	
Gly	Lys	Lys	Ala	Arg	Glu	Ile	Asp	Glu	Ser	Leu	Ile	Phe	Tyr	Lys	Lys	305	310	315	320
Trp	Glu	Leu	Glu	Ala	Cys	Val	Asp	Ala	Ala	Leu	Leu	Ala	Thr	Gln	Met	325	330	335	
Asp	Arg	Val	Asn	Ala	Ile	Pro	Phe	Thr	Tyr	Glu	Gln	Leu	Asp	Val	Leu	340	345	350	
Lys	His	Lys	Leu	Asp	Glu	Leu	Tyr	Pro	Gln	Gly	Tyr	Pro	Glu	Ser	Val	355	360	365	
Ile	Gln	His	Leu	Gly	Tyr	Leu	Phe	Leu	Lys	Met	Ser	Pro	Glu	Asp	Ile	370	375	380	
Arg	Lys	Trp	Asn	Val	Thr	Ser	Leu	Glu	Thr	Leu	Lys	Ala	Leu	Leu	Glu	385	390	395	400
Val	Asn	Lys	Gly	His	Glu	Met	Ser	Pro	Gln	Val	Ala	Thr	Leu	Ile	Asp	405	410	415	
Arg	Phe	Val	Lys	Gly	Arg	Gly	Gln	Leu	Asp	Lys	Asp	Thr	Leu	Asp	Thr	420	425	430	
Leu	Thr	Ala	Phe	Tyr	Pro	Gly	Tyr	Leu	Cys	Ser	Leu	Ser	Pro	Glu	Glu	435	440	445	
Leu	Ser	Ser	Val	Pro	Pro	Ser	Ser	Ile	Trp	Ala	Val	Arg	Pro	Gln	Asp	450	455	460	

205

Leu Asp Thr Cys Asp Pro Arg Gln Leu Asp Val Leu Tyr Pro Lys Ala
 465 470 475 480
 Arg Leu Ala Phe Gln Asn Met Asn Gly Ser Glu Tyr Phe Val Lys Ile
 485 490 495
 Gln Ser Phe Leu Gly Gly Ala Pro Thr Glu Asp Leu Lys Ala Leu Ser
 500 505 510
 Gln Gln Asn Val Ser Met Asp Leu Ala Thr Phe Met Lys Leu Arg Thr
 515 520 525
 Asp Ala Val Leu Pro Leu Thr Val Ala Glu Val Gln Lys Leu Leu Gly
 530 535 540
 Pro His Val Glu Gly Leu Lys Ala Glu Glu Arg His Arg Pro Val Arg
 545 550 555 560
 Asp Trp Ile Leu Arg Gln Arg Gln Asp Asp Leu Asp Thr Leu Gly Leu
 565 570 575
 Gly Leu Gln Gly Gly Ile Pro Asn Gly Tyr Leu Val Leu Asp Leu Ser
 580 585 590
 Val Gln Gly Gly Arg Gly Gly Gln Ala Arg Ala Gly Gly Arg Ala Gly
 595 600 605
 Gly Val Glu Val Gly Ala Leu Ser His Pro Ser Leu Cys Arg Gly Pro
 610 615 620
 Leu Gly Asp Ala Leu Pro Pro Arg Thr Trp Thr Cys Ser His Arg Pro
 625 630 635 640
 Gly Thr Ala Pro Ser Leu His Pro Gly Leu Arg Ala Pro Leu Pro Cys
 645 650 655
 Trp Pro Gln Pro Cys Trp Gly Ser Pro Pro Gly Gln Glu Gln Ala Arg
 660 665 670
 Val Ile Pro Val Pro Pro Gln Glu Asn Ser Arg Ser Val Asn Gly Asn
 675 680 685
 Met Pro Pro Ala Asp Thr
 690

<210> 200

<211> 2081

<212> DNA

<213> Homo sapiens

<400> 200

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ctaaagcata aactggatga gctctaccca caaggttacc ccgagtctgt gatccagcac 1200

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206

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ctgggctacc tcttctcaa gatgagccct gaggacattc gcaagtggaa tgtgacgtcc 1260
ctggagaccc tgaaggcttt gcttgaagtc aacaaagggc acgaaatgag tcctcaggtg 1320
gccaccctga tcgaccgctt tgtgaaggga aggggccagc tagacaaaga caccctagac 1380
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tgccccctgc agacacgtaa aaaaaaaaaa aaaaaaaaaa a 2081

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<210> 201

<211> 612

<212> PRT

<213> Homo sapiens

<400> 201

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Met Ala Leu Pro Thr Ala Arg Pro Leu Leu Gly Ser Cys Gly Thr Pro
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          20          25          30
Pro Ser Arg Thr Leu Ala Gly Glu Thr Gly Gln Glu Ala Ala Pro Leu
          35          40          45
Asp Gly Val Leu Ala Asn Pro Pro Asn Ile Ser Ser Leu Ser Pro Arg
          50          55          60
Gln Leu Leu Gly Phe Pro Cys Ala Glu Val Ser Gly Leu Ser Thr Glu
          65          70          75          80
Arg Val Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu
          85          90          95
Ser Thr Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro
          100          105          110
Glu Asp Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro
          115          120          125
Asp Ala Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile
          130          135          140
Thr Lys Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln
          145          150          155          160
Arg Leu Leu Pro Ala Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu
          165          170          175
Leu Ser Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu
          180          185          190
Pro Gly Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu
          195          200          205
Val Ser Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg
          210          215          220
Ala Ala Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp
          225          230          235          240
Ser Val Ser Thr Met Asp Ala Leu Arg Gly Leu Leu Pro Val Leu Gly
          245          250          255
Gln Pro Ile Ile Arg Ser Ile Pro Gln Gly Ile Val Ala Ala Trp Arg
          260          265          270
Gln Arg Ser Ser Arg Asp Pro Ser Trp Arg Gln Pro Glu Arg Thr Ile
          275          280          285

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207

Leu Arg Pro Arg Phe Arg Arg Glu Val Glu Lys Thr Ala Cys Pro Ser
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 Gly Lys Lys Ala Arg Glu Ile Asp Glu Ser Leu Ile Phe Tyr Lys Lys
 305 310 315 320
 Trp Glu Leu Glu Ala Cys Val Asp Ala Ala Leu Leu Ala Thr Gln Met
 325 330 335
 Asp Arg Val Asn Ala Ile Pro Phe Thr Tyr Glu Gln Leu Asp Val Leu
 340 345 350
 Lys His Lys Leu Asp Glu Leu Tyr Pro Gln Gly Tyr Pro Glu Ser Val
 355 360 365
 Ile Gln His Leu Gly Tyr Leu Phe Leu Lys Met Ser Pro Glu Asp Ile
 370 375 380
 Arg Lys Trp Asn Val Thr Ser Leu Glu Thr Leu Lys Ala Leu Leu Glu
 385 390 395 400
 Val Asn Lys Gly His Glu Met Ser Pro Gln Val Ala Thr Leu Ile Asp
 405 410 415
 Arg Phe Val Lys Gly Arg Gly Gln Leu Asp Lys Asp Thr Leu Asp Thr
 420 425 430
 Leu Thr Ala Phe Tyr Pro Gly Tyr Leu Cys Ser Leu Ser Pro Glu Glu
 435 440 445
 Leu Ser Ser Val Pro Pro Ser Ser Ile Trp Ala Val Arg Pro Gln Asp
 450 455 460
 Leu Asp Thr Cys Asp Pro Arg Gln Leu Asp Val Leu Tyr Pro Lys Ala
 465 470 475 480
 Arg Leu Ala Phe Gln Asn Met Asn Gly Ser Glu Tyr Phe Val Lys Ile
 485 490 495
 Gln Ser Phe Leu Gly Gly Ala Pro Thr Glu Asp Leu Lys Ala Leu Ser
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 Gln Gln Asn Val Ser Met Asp Leu Ala Thr Phe Met Lys Leu Arg Thr
 515 520 525
 Asp Ala Val Leu Pro Leu Thr Val Ala Glu Val Gln Lys Leu Leu Gly
 530 535 540
 Pro His Val Glu Gly Leu Lys Ala Glu Glu Arg His Arg Pro Val Arg
 545 550 555 560
 Asp Trp Ile Leu Arg Gln Arg Gln Asp Asp Leu Asp Thr Leu Gly Leu
 565 570 575
 Gly Leu Gln Gly Gly Ile Pro Asn Gly Tyr Leu Val Leu Asp Leu Ser
 580 585 590
 Val Gln Gly Pro Gly Pro Val Leu Thr Val Leu Ala Leu Leu Leu Ala
 595 600 605
 Ser Thr Leu Ala
 610

<210> 202

<211> 1195

<212> DNA

<213> Homo sapiens

<400> 202

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 gatgagctct accacaagg ttaocccgag tctgtgatcc agcacctggg ctacctcttc 240
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 cgctttgtga aggggaaggg ccagctagac aaagacaccc tagacaccct gaccgccttc 420
 taccctgggt acctgtgctc cctcagcccc gaggagctga gctccgtgcc cccagcagc 480

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cagtccttcc tgggtggggc cccacaggag gatttgaagg cgctcagtca gcagaatgtg 660
agcatggact tggccacgtt catgaagctg cggacggatg cgggtgctgcc gttgactgtg 720
gctgaggtgc agaaacttct gggacccac gtggagggcc tgaaggcgga ggagcggcac 780
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cggggcggcc agggcagggc tgggggcaga gctgggggcg tggaggtggg cgctctgagt 960
caccctctc tctgtagagg cctctcggg gacgccctgc ctctaggac ctggacctgt 1020
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tggccccagc cctgtgggg atccccgct ggccaggagc aggcacgggt gatccccgtt 1140
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<210> 203

<211> 398

<212> PRT

<213> Homo sapiens

<400> 203

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Val Glu Lys Thr Ala Cys Pro Ser Gly Lys Lys Ala Arg Glu Ile Asp
  1           5           10          15
Glu Ser Leu Ile Phe Tyr Lys Lys Trp Glu Leu Glu Ala Cys Val Asp
          20           25           30
Ala Ala Leu Leu Ala Thr Gln Met Asp Arg Val Asn Ala Ile Pro Phe
          35           40           45
Thr Tyr Glu Gln Leu Asp Val Leu Lys His Lys Leu Asp Glu Leu Tyr
          50           55           60
Pro Gln Gly Tyr Pro Glu Ser Val Ile Gln His Leu Gly Tyr Leu Phe
          65           70           75           80
Leu Lys Met Ser Pro Glu Asp Ile Arg Lys Trp Asn Val Thr Ser Leu
          85           90           95
Glu Thr Leu Lys Ala Leu Leu Glu Val Asn Lys Gly His Glu Met Ser
          100          105          110
Pro Gln Val Ala Thr Leu Ile Asp Arg Phe Val Lys Gly Arg Gly Gln
          115          120          125
Leu Asp Lys Asp Thr Leu Asp Thr Leu Thr Ala Phe Tyr Pro Gly Tyr
          130          135          140
Leu Cys Ser Leu Ser Pro Glu Glu Leu Ser Ser Val Pro Pro Ser Ser
          145          150          155          160
Ile Trp Ala Val Arg Pro Gln Asp Leu Asp Thr Cys Asp Pro Arg Gln
          165          170          175
Leu Asp Val Leu Tyr Pro Lys Ala Arg Leu Ala Phe Gln Asn Met Asn
          180          185          190
Gly Ser Glu Tyr Phe Val Lys Ile Gln Ser Phe Leu Gly Gly Ala Pro
          195          200          205
Thr Glu Asp Leu Lys Ala Leu Ser Gln Gln Asn Val Ser Met Asp Leu
          210          215          220
Ala Thr Phe Met Lys Leu Arg Thr Asp Ala Val Leu Pro Leu Thr Val
          225          230          235          240
Ala Glu Val Gln Lys Leu Leu Gly Pro His Val Glu Gly Leu Lys Ala
          245          250          255
Glu Glu Arg His Arg Pro Val Arg Asp Trp Ile Leu Arg Gln Arg Gln
          260          265          270
Asp Asp Leu Asp Thr Leu Gly Leu Gly Leu Gln Gly Gly Ile Pro Asn
          275          280          285
Gly Tyr Leu Val Leu Asp Leu Ser Val Gln Gly Gly Arg Gly Gly Gln
          290          295          300
Ala Arg Ala Gly Gly Arg Ala Gly Gly Val Glu Val Gly Ala Leu Ser

```

209

305		310		315		320
His Pro Ser Leu Cys Arg Gly Pro Leu Gly Asp Ala Leu Pro Pro Arg						
	325		330		335	
Thr Trp Thr Cys Ser His Arg Pro Gly Thr Ala Pro Ser Leu His Pro						
	340		345		350	
Gly Leu Arg Ala Pro Leu Pro Cys Trp Pro Gln Pro Cys Trp Gly Ser						
	355		360		365	
Pro Pro Gly Gln Glu Gln Ala Arg Val Ile Pro Val Pro Pro Gln Glu						
	370		375		380	
Asn Ser Arg Ser Val Asn Gly Asn Met Pro Pro Ala Asp Thr						
385	390		395			

<210> 204

<211> 2085

<212> DNA

<213> Homo sapiens

<400> 204

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tgtgggaccc	ccgccctcgg	cagcctcctg	ttcctgctct	tcagcctcgg	atgggtgcag	180
ccctcgagga	ccctggctgg	agagacaggg	caggaggctg	cacccctgga	cggagtcctg	240
gccaaacccac	ctaacatttc	cagcctctcc	cctcgccaac	tccttggctt	cccgtgtgcg	300
gaggtgtccg	gcctgagcac	ggagcgtgtc	cgggagctgg	ctgtggcctt	ggcacagaag	360
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gaggacctgg	acgccctccc	attggacctg	ctgctattcc	tcaaccacaga	tgcgttctcg	480
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gaggagcggc	accgcccggt	gcgggactgg	atcctacggc	agcggcagga	cgacctggac	1800
acgtctgggc	tggggctaca	gggcggcatc	cccaacggct	acctggtcct	agacctcagc	1860
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cctgctgggg	atccccgcct	ggccaggagc	aggcacgggt	gatccccgtt	ccaccccaag	2040
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<210> 205

<211> 622

<212> PRT

<213> Homo sapiens

<400> 205

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Met Ala Leu Pro Thr Ala Arg Pro Leu Leu Gly Ser Cys Gly Thr Pro
 1          5          10          15
Ala Leu Gly Ser Leu Leu Phe Leu Leu Phe Ser Leu Gly Trp Val Gln
          20          25          30
Pro Ser Arg Thr Leu Ala Gly Glu Thr Gly Gln Glu Ala Ala Pro Leu
          35          40          45
Asp Gly Val Leu Ala Asn Pro Asn Ile Ser Ser Leu Ser Pro Arg
          50          55          60
Gln Leu Leu Gly Phe Pro Cys Ala Glu Val Ser Gly Leu Ser Thr Glu
          65          70          75          80
Arg Val Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu
          85          90          95
Ser Thr Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro
          100          105          110
Glu Asp Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro
          115          120          125
Asp Ala Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile
          130          135          140
Thr Lys Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln
          145          150          155          160
Arg Leu Leu Pro Ala Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu
          165          170          175
Leu Ser Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu
          180          185          190
Pro Gly Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu
          195          200          205
Val Ser Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg
          210          215          220
Ala Ala Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp
          225          230          235          240
Ser Val Ser Thr Met Asp Ala Leu Arg Gly Leu Leu Pro Val Leu Gly
          245          250          255
Gln Pro Ile Ile Arg Ser Ile Pro Gln Gly Ile Val Ala Ala Trp Arg
          260          265          270
Gln Arg Ser Ser Arg Asp Pro Ser Trp Arg Gln Pro Glu Arg Thr Ile
          275          280          285
Leu Arg Pro Arg Phe Arg Arg Glu Val Glu Lys Thr Ala Cys Pro Ser
          290          295          300
Gly Lys Lys Ala Arg Glu Ile Asp Glu Ser Leu Ile Phe Tyr Lys Lys
          305          310          315          320
Trp Glu Leu Glu Ala Cys Val Asp Ala Ala Leu Leu Ala Thr Gln Met
          325          330          335
Asp Arg Val Asn Ala Ile Pro Phe Thr Tyr Glu Gln Leu Asp Val Leu
          340          345          350
Lys His Lys Leu Asp Glu Leu Tyr Pro Gln Gly Tyr Pro Glu Ser Val
          355          360          365
Ile Gln His Leu Gly Tyr Leu Phe Leu Lys Met Ser Pro Glu Asp Ile
          370          375          380
Arg Lys Trp Asn Val Thr Ser Leu Glu Thr Leu Lys Ala Leu Leu Glu
          385          390          395          400
Val Asn Lys Gly His Glu Met Ser Pro Gln Val Ala Thr Leu Ile Asp
          405          410          415
Arg Phe Val Lys Gly Arg Gly Gln Leu Asp Lys Asp Thr Leu Asp Thr
          420          425          430
Leu Thr Ala Phe Tyr Pro Gly Tyr Leu Cys Ser Leu Ser Pro Glu Glu

```

211

435	440	445
Leu Ser Ser Val Pro Pro Ser Ser Ile Trp Ala Val Arg Pro Gln Asp		
450	455	460
Leu Asp Thr Cys Asp Pro Arg Gln Leu Asp Val Leu Tyr Pro Lys Ala		
465	470	475
Arg Leu Ala Phe Gln Asn Met Asn Gly Ser Glu Tyr Phe Val Lys Ile		
485	490	495
Gln Ser Phe Leu Gly Gly Ala Pro Thr Glu Asp Leu Lys Ala Leu Ser		
500	505	510
Gln Gln Asn Val Ser Met Asp Leu Ala Thr Phe Met Lys Leu Arg Thr		
515	520	525
Asp Ala Val Leu Pro Leu Thr Val Ala Glu Val Gln Lys Leu Leu Gly		
530	535	540
Pro His Val Glu Gly Leu Lys Ala Glu Glu Arg His Arg Pro Val Arg		
545	550	555
Asp Trp Ile Leu Arg Gln Arg Gln Asp Asp Leu Asp Thr Leu Gly Leu		
565	570	575
Gly Leu Gln Gly Gly Ile Pro Asn Gly Tyr Leu Val Leu Asp Leu Ser		
580	585	590
Val Gln Glu Ala Leu Ser Gly Thr Pro Cys Leu Leu Gly Pro Gly Pro		
595	600	605
Val Leu Thr Val Leu Ala Leu Leu Leu Ala Ser Thr Leu Ala		
610	615	620

<210> 206

<211> 2111

<212> DNA

<213> Homo sapiens

<400> 206

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tcctgtggga ccccgccct cggcagcctc ctgttcctgc tcttcagcct cggatgggtg 180
cagccctcga ggacctggc tggagagaca gggcaggagg ctgcaccctt ggacggagtc 240
ctggccaacc cacctaaccat ttccagcctc tcccctcgcc aactccttgg ctcccggtg 300
gcgagggtgt ccggcctgag cacggagcgt gtccgggagc tggctgtggc cttggcacag 360
aagaatgtca agctctcaac agagcagctg cgctgtctgg ctaccggct ctctgagccc 420
cccgaggacc tggacgccct cccattggac ctgctgctat tctcaaccc agatgcgttc 480
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212

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gcggaggagc ggcaccgccc ggtgcgggac tggatcctac ggcagcggca ggacgacctg 1800
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agccctgctg gggatccccg cctggccagg agcaggcacg ggtgatcccc gttccacccc 2040
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aaaaaaaaaa a                                     2111

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<210> 207

<211> 2107

<212> DNA

<213> Homo sapiens

<400> 207

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tggccggcca ctccgctctg ctgtgacgcg cggacagaga gctaccggtg gaccacgggt 60
gcctccctcc ctgggatcta cacagaccat ggcttgcaa cggctcgacc cctgttggtc 120
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<210> 208

<211> 628

<212> PRT

<213> Homo sapiens

<400> 208

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Met Ala Leu Gln Arg Leu Asp Pro Cys Trp Ser Cys Gly Asp Arg Pro
 1          5          10          15
Gly Ser Leu Leu Phe Leu Leu Phe Ser Leu Gly Trp Val His Pro Ala
          20          25          30
Arg Thr Leu Ala Gly Glu Thr Gly Thr Glu Ser Ala Pro Leu Gly Gly
          35          40          45
Val Leu Thr Thr Pro His Asn Ile Ser Ser Leu Ser Pro Arg Gln Leu
          50          55          60
Leu Gly Phe Pro Cys Ala Glu Val Ser Gly Leu Ser Thr Glu Arg Val
          65          70          75          80
Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu Ser Thr
          85          90          95
Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro Glu Asp
          100          105          110
Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro Asp Ala
          115          120          125
Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile Thr Lys
          130          135          140
Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln Arg Leu
          145          150          155          160
Leu Pro Ala Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu Leu Ser
          165          170          175          180
Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu Pro Gly
          180          185          190
Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu Val Ser
          195          200          205
Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg Ala Ala
          210          215          220
Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp Ser Val
          225          230          235          240
Ser Thr Met Asp Ala Leu Arg Gly Leu Leu Pro Val Leu Gly Gln Pro
          245          250          255
Ile Ile Arg Ser Ile Pro Gln Gly Ile Val Ala Ala Trp Arg Gln Arg
          260          265          270
Ser Ser Arg Asp Pro Ser Trp Arg Gln Pro Glu Arg Thr Ile Leu Arg
          275          280          285
Pro Arg Phe Arg Arg Glu Val Glu Lys Thr Ala Cys Pro Ser Gly Lys
          290          295          300
Lys Ala Arg Glu Ile Asp Glu Ser Leu Ile Phe Tyr Lys Lys Trp Glu
          305          310          315          320
Leu Glu Ala Cys Val Asp Ala Ala Leu Leu Ala Thr Gln Met Asp Arg
          325          330          335
Val Asn Ala Ile Pro Phe Thr Tyr Glu Gln Leu Asp Val Leu Lys His
          340          345          350
Lys Leu Asp Glu Leu Tyr Pro Gln Gly Tyr Pro Glu Ser Val Ile Gln
          355          360          365
His Leu Gly Tyr Leu Phe Leu Lys Met Ser Pro Glu Asp Ile Arg Lys
          370          375          380
Trp Asn Val Thr Ser Leu Glu Thr Leu Lys Ala Leu Leu Glu Val Asp
          385          390          395          400
Lys Gly His Glu Met Ser Pro Gln Ala Pro Arg Arg Pro Leu Pro Gln
          405          410          415
Val Ala Thr Leu Ile Asp Arg Phe Val Lys Gly Arg Gly Gln Leu Asp
          420          425          430
Lys Asp Thr Leu Asp Thr Leu Thr Ala Phe Tyr Pro Gly Tyr Leu Cys
          435          440          445
Ser Leu Ser Pro Glu Glu Leu Ser Ser Val Pro Pro Ser Ser Ile Trp

```

214

450	455	460
Ala Val Arg Pro Gln Asp	Leu Asp Thr Cys Asp	Pro Arg Gln Leu Asp
465	470	475
Val Leu Tyr Pro Lys Ala	Arg Leu Ala Phe Gln	Asn Met Asn Gly Ser
485	490	495
Glu Tyr Phe Val Lys Ile	Gln Ser Phe Leu Gly	Gly Ala Pro Thr Glu
500	505	510
Asp Leu Lys Ala Leu Ser	Gln Gln Asn Val Ser	Met Asp Leu Ala Thr
515	520	525
Phe Met Lys Leu Arg Thr	Asp Ala Val Leu Pro	Leu Thr Val Ala Glu
530	535	540
Val Gln Lys Leu Leu Gly	Pro His Val Glu Gly	Leu Lys Ala Glu Glu
545	550	555
Arg His Arg Pro Val Arg	Asp Trp Ile Leu Arg	Gln Arg Gln Asp Asp
565	570	575
Leu Asp Thr Leu Gly Leu	Gln Gly Gly Ile Pro	Asn Gly Tyr
580	585	590
Leu Val Leu Asp Leu Ser	Val Gln Glu Thr Leu	Ser Gly Thr Pro Cys
595	600	605
Leu Leu Gly Pro Gly Pro	Val Leu Thr Val Leu	Ala Leu Leu Leu Ala
610	615	620
Ser Thr Leu Ala		
625		

<210> 209

<211> 2316

<212> DNA

<213> Homo sapiens

<400> 209

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ccacgtgtgg gcattggccs gcgatctgaa aggggctgtc ctgttctca tgggcgctgc 180
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215

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<211> 630

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)...(630)

<223> Xaa = Any Amino Acid

<400> 210

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          35          40          45
Asp Gly Val Leu Ala Asn Pro Pro Asn Ile Ser Ser Leu Ser Pro Arg
          50          55          60
Gln Leu Leu Gly Phe Pro Cys Ala Glu Val Ser Gly Leu Ser Thr Glu
          65          70          75          80
Arg Val Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu
          85          90          95
Ser Thr Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro
          100          105          110
Glu Asp Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro
          115          120          125
Asp Ala Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile
          130          135          140
Thr Lys Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln
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Arg Leu Leu Pro Ala Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu
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Leu Ser Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu
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Pro Gly Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu
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Val Ser Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg
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Ala Ala Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp
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216

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 305 310 315 320
 Trp Glu Leu Glu Ala Cys Val Asp Ala Ala Leu Leu Ala Thr Gln Met
 325 330 335
 Asp Arg Val Asn Ala Ile Pro Phe Thr Tyr Glu Gln Leu Asp Val Leu
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 Lys His Lys Leu Asp Glu Leu Tyr Pro Gln Gly Tyr Pro Glu Ser Val
 355 360 365
 Ile Gln His Leu Gly Tyr Leu Phe Leu Lys Met Ser Pro Glu Asp Ile
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 420 425 430
 Leu Asp Lys Asp Thr Leu Asp Thr Leu Thr Ala Phe Tyr Pro Gly Tyr
 435 440 445
 Leu Cys Ser Leu Ser Pro Glu Glu Leu Ser Ser Val Pro Pro Ser Ser
 450 455 460
 Ile Trp Ala Val Arg Pro Gln Asp Leu Asp Thr Cys Asp Pro Arg Gln
 465 470 475 480
 Leu Asp Val Leu Tyr Pro Lys Ala Arg Leu Ala Phe Gln Asn Met Asn
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 Gly Ser Glu Tyr Phe Val Lys Ile Gln Ser Phe Leu Gly Gly Ala Pro
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 Thr Glu Asp Leu Lys Ala Leu Ser Gln Gln Asn Val Ser Met Asp Leu
 515 520 525
 Ala Thr Phe Met Lys Leu Arg Thr Asp Ala Val Leu Pro Leu Thr Val
 530 535 540
 Ala Glu Val Gln Lys Leu Leu Gly Pro His Val Glu Gly Leu Lys Ala
 545 550 555 560
 Glu Glu Arg His Arg Pro Val Arg Asp Trp Ile Leu Arg Gln Arg Gln
 565 570 575
 Asp Asp Leu Asp Thr Leu Gly Leu Gly Leu Gln Gly Gly Ile Pro Asn
 580 585 590
 Gly Tyr Leu Val Leu Asp Leu Ser Val Gln Xaa Xaa Leu Ser Gly Thr
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 Leu Ala Ser Thr Leu Ala
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<210> 211

<211> 1721

<212> DNA

<213> Homo sapiens

<400> 211

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<210> 212

<211> 515

<212> PRT

<213> Homo sapiens

<400> 212

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20      25      30
Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
35      40      45
Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val Leu Ser Ser His
50      55      60
Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr Leu
65      70      75      80
Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Thr Trp Gly Gln
85      90      95
Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr Thr
100     105     110
Pro Pro Ala His Asp Val Thr Ser Ala Pro Asp Asn Lys Pro Ala Pro
115     120     125
Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
130     135     140
Arg Pro Pro Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
145     150     155     160
Ala Pro Asp Thr Arg Pro Pro Pro Gly Ser Thr Ala Pro Ala Ala His
165     170     175
Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
180     185     190
Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Asn Arg Pro Ala Leu
195     200     205

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218

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 Ala Ser Gly Ser Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala Arg
 225 230 235 240
 Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro Ser
 245 250 255
 His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys Thr
 260 265 270
 Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser Ser
 275 280 285
 Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe Phe
 290 295 300
 Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp
 305 310 315 320
 Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met
 325 330 335
 Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile
 340 345 350
 Lys Phe Arg Pro Gly Ser Val Val Gln Leu Thr Leu Ala Phe Arg
 355 360 365
 Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr
 370 375 380
 Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser
 385 390 395 400
 Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val
 405 410 415
 Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala
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 Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg
 435 440 445
 Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His
 450 455 460
 Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro
 465 470 475 480
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 Ala Asn Leu
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<210> 213

<211> 5793

<212> DNA

<213> Homo sapiens

<400> 213

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220

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<210> 214

<211> 1783

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)...(1783)

<223> Xaa = Any Amino Acid

<400> 214

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<210> 216

<211> 1148

<212> PRT

<213> Homo sapiens

<400> 216

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20          25          30
Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp
35          40          45
Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr
50          55          60
Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu Tyr Val Asn Gly
65          70          75          80
Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser
85          90          95
Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro
100          105          110
Thr Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile
115          120          125
Thr Asn Leu Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys
130          135          140
Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe
145          150          155          160
Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu
165          170          175
Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys
180          185          190
Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu
195          200          205
Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro
210          215          220
Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg

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227

225					230					235				240
Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr	Pro	Thr	Val	Asp
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Gly	Thr	Ser	Gly	Thr	Pro	Val	Ser	Lys	Pro	Gly	Pro	Ser	Ala	Ala
			260					265					270	
Pro	Leu	Leu	Val	Leu	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu
		275						280				285		Arg
Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr
	290					295					300			Thr
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Ser	Leu	Phe	Lys	Ser	Thr
305					310					315				320
Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro
			325					330					335	Glu
Lys	Asp	Gly	Thr	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	His
			340					345					350	Pro
Asp	Pro	Lys	Ser	Pro	Arg	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu
		355					360					365		Leu
Ser	Gln	Leu	Thr	His	Asn	Ile	Thr	Glu	Leu	Gly	His	Tyr	Ala	Leu
	370					375					380			Asp
Asn	Asp	Ser	Leu	Phe	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val
385				390						395				400
Thr	Thr	Ser	Thr	Pro	Gly	Thr	Pro	Thr	Val	Tyr	Leu	Gly	Ala	Ser
			405						410				415	Lys
Thr	Pro	Ala	Ser	Ile	Phe	Gly	Pro	Ser	Ala	Ala	Ser	His	Leu	Leu
		420						425					430	Ile
Leu	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Arg	Tyr	Glu	Glu
	435						440				445			Asn
Met	Trp	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu
	450					455				460				Gln
Gly	Leu	Leu	Arg	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu
465					470				475					Tyr
Ser	Gly	Ser	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Glu
			485					490				495		Ala
Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Pro	Asp	Pro	Thr	Gly
		500						505				510		Pro
Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Leu	Glu	Leu	Ser	Gln	Leu	Thr
	515						520					525		His
Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu
	530					535				540				Tyr
Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Thr
545					550				555					Gly
Val	Val	Ser	Glu	Glu	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Asn	Asn
			565					570					575	Leu
Arg	Tyr	Met	Ala	Asp	Met	Gly	Gln	Pro	Gly	Ser	Leu	Lys	Phe	Asn
		580						585				590		Ile
Thr	Asp	Asn	Val	Met	Lys	His	Leu	Leu	Ser	Pro	Leu	Phe	Gln	Arg
	595						600				605			Ser
Ser	Leu	Gly	Ala	Arg	Tyr	Thr	Gly	Cys	Arg	Val	Ile	Ala	Leu	Arg
	610					615				620				Ser
Val	Lys	Asn	Gly	Ala	Glu	Thr	Arg	Val	Asp	Leu	Leu	Cys	Thr	Tyr
625					630				635					Leu
Gln	Pro	Leu	Ser	Gly	Pro	Gly	Leu	Pro	Ile	Lys	Gln	Val	Phe	His
			645					650					655	Glu
Leu	Ser	Gln	Gln	Thr	His	Gly	Ile	Thr	Arg	Leu	Gly	Pro	Tyr	Ser
		660					665				670			Leu
Asp	Lys	Asp	Ser	Leu	Tyr	Leu	Asn	Gly	Tyr	Asn	Glu	Pro	Gly	Leu
	675					680					685			Asp
Glu	Pro	Pro	Thr	Thr	Pro	Lys	Pro	Ala	Thr	Thr	Phe	Leu	Pro	Pro

690	695	700
Ser Glu Ala Thr Thr Ala Met Gly Tyr His Leu Lys Thr Leu Thr Leu		
705	710	715
Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly		720
	725	730
Ser Ala Thr Phe Asn Ser Thr Glu Gly Val Leu Gln His Leu Leu Arg		735
	740	745
Pro Leu Phe Gln Lys Ser Ser Met Gly Pro Phe Tyr Leu Gly Cys Gln		750
	755	760
Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp		765
	770	775
Thr Thr Cys Thr Tyr His Pro Asp Pro Val Gly Pro Gly Leu Asp Ile		780
785	790	795
Gln Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln		800
	805	810
Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser Leu Phe Ile Asn Gly Tyr		815
	820	825
Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr Gln Ile Asn Phe His		830
	835	840
Ile Val Asn Trp Asn Leu Ser Asn Pro Asp Pro Thr Ser Ser Glu Tyr		845
	850	855
Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys		860
865	870	875
Gly Ser Gln Leu His Asp Thr Phe Arg Phe Cys Leu Val Thr Asn Leu		880
	885	890
Thr Met Asp Ser Val Leu Val Thr Val Lys Ala Leu Phe Ser Ser Asn		895
	900	905
Leu Asp Pro Ser Leu Val Glu Gln Val Phe Leu Asp Lys Thr Leu Asn		910
	915	920
Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln Leu Val Asp Ile His		925
	930	935
Val Thr Glu Met Glu Ser Ser Val Tyr Gln Pro Thr Ser Ser Ser Ser		940
945	950	955
Thr Gln His Phe Tyr Pro Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser		960
	965	970
Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg		975
	980	985
Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys		990
	995	1000
Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr Phe Arg Ser Val Pro Asn		1005
	1010	1015
Arg His His Thr Gly Val Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala		1020
1025	1030	1035
Arg Arg Val Asp Arg Val Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr		1040
	1045	1050
Arg Asn Gly Thr Gln Leu Gln Asn Phe Thr Leu Asp Arg Ser Ser Val		1055
	1060	1065
Leu Val Asp Gly Tyr Ser Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn		1070
	1075	1080
Ser Asp Leu Pro Phe Trp Ala Val Ile Phe Ile Gly Leu Ala Gly Leu		1085
	1090	1095
Leu Gly Leu Ile Thr Cys Leu Ile Cys Gly Val Leu Val Thr Thr Arg		1100
1105	1110	1115
Arg Arg Lys Lys Glu Gly Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly		1120
	1125	1130
Tyr Tyr Gln Ser His Leu Asp Leu Glu Asp Leu Gln		1135
	1140	1145

<210> 217
 <211> 1890
 <212> PRT
 <213> Homo sapiens

<400> 217

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Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Asn	Pro	Trp	Ser	Ser
		35					40					45			
Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Ala	Thr
		50				55					60				
Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Val	Pro	Leu
65					70					75					80
Leu	Ile	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	His	Tyr	Glu
				85					90					95	
Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg
			100					105					110		
Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly
		115					120					125			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	His
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Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	Leu	Arg	Leu	Asp	Pro
145					150					155					160
Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln
				165					170					175	
Leu	Thr	Asn	Ser	Val	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp
			180					185					190		
Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val	Pro	Thr	Thr
		195				200						205			
Ser	Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu	Glu	Thr	Ser	Gly	Thr	Pro
		210				215					220				
Ala	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Gly	Pro	Leu	Leu	Val	Pro	Phe
225					230					235					240
Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg
				245					250					255	
His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly
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Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser
		275					280					285			
Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Arg	Gly	Ala	Ala	Thr
		290				295					300				
Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Leu	Asn	Pro	Gly
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Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Lys	Leu	Thr	Arg	Gly
				325					330					335	
Ile	Ile	Glu	Leu	Gly	Pro	Tyr	Leu	Leu	Asp	Arg	Gly	Ser	Leu	Tyr	Val
			340					345					350		
Asn	Gly	Phe	Thr	His	Arg	Asn	Phe	Val	Pro	Ile	Thr	Ser	Thr	Pro	Gly
		355					360					365			
Thr	Ser	Thr	Val	His	Leu	Gly	Thr	Ser	Glu	Thr	Pro	Ser	Ser	Leu	Pro
		370				375					380				
Arg	Pro	Ile	Val	Pro	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe
385					390					395					400
Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Ala	Met	Arg	His	Pro	Gly	Ser

				405					410					415	
Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Pro
			420					425					430		
Leu	Phe	Lys	Asn	Thr	Ser	Ile	Gly	Pro	Leu	Tyr	Ser	Ser	Cys	Arg	Leu
		435					440				445				
Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Lys	Ala	Ala	Thr	Arg	Val	Asp	Ala
	450				455						460				
Ile	Cys	Thr	His	His	Pro	Asp	Pro	Gln	Ser	Pro	Gly	Leu	Asn	Arg	Glu
465				470						475					480
Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Thr	Glu	Leu
			485					490					495		
Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asp	Gly	Phe	Thr
		500					505					510			
His	Trp	Ser	Pro	Ile	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Ile	Val
	515					520					525				
Asn	Leu	Gly	Thr	Ser	Gly	Ile	Pro	Pro	Ser	Leu	Pro	Glu	Thr	Thr	Ala
	530				535					540					
Thr	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn
545				550					555						560
Leu	Gln	Tyr	Glu	Glu	Asn	Met	Gly	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn
			565					570					575		
Ile	Thr	Glu	Ser	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser
		580					585					590			
Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg
	595					600					605				
Pro	Glu	Lys	Asp	Gly	Val	Ala	Thr	Arg	Val	Asp	Ala	Ile	Cys	Thr	His
	610			615					620						
Arg	Pro	Asp	Pro	Lys	Ile	Pro	Gly	Leu	Asp	Arg	Gln	Gln	Leu	Tyr	Trp
625				630				635							640
Glu	Leu	Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr
			645					650				655			
Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	Gln	Arg	Ser	Ser
		660					665					670			
Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Phe	Thr	Val	Gln	Pro	Glu	Thr
	675					680					685				
Ser	Glu	Thr	Pro	Ser	Ser	Leu	Pro	Gly	Pro	Thr	Ala	Thr	Gly	Pro	Val
	690			695				700							
Leu	Leu	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Ile	Asn	Leu	Gln	Tyr	Glu
705				710				715							720
Glu	Asp	Met	His	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg
			725					730					735		
Val	Leu	Gln	Gly	Leu	Leu	Met	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Ser
		740					745					750			
Ser	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp
	755			760	</										

865		870		875		880
His Pro Gly Ser Arg	Lys Phe Asn Thr	Thr Glu Arg Val	Leu Gln Gly			
	885	890	895			
Leu Leu Arg Pro Val	Phe Lys Asn Thr	Ser Val Gly Pro	Leu Tyr Ser			
	900	905	910			
Gly Cys Arg Leu Thr	Leu Leu Arg Pro	Lys Lys Asp Gly	Ala Ala Thr			
	915	920	925			
Lys Val Asp Ala Ile	Cys Thr Tyr Arg	Pro Asp Pro Lys	Ser Pro Gly			
	930	935	940			
Leu Asp Arg Glu Gln	Leu Tyr Trp Glu	Leu Ser Gln Leu	Thr His Ser			
945	950	955	960			
Ile Thr Glu Leu Gly	Pro Tyr Thr Leu	Asp Arg Asp Ser	Leu Tyr Val			
	965	970	975			
Asn Gly Phe Thr Gln	Arg Ser Ser Val	Pro Thr Thr Ser	Ile Pro Gly			
	980	985	990			
Thr Pro Thr Val Asp	Leu Gly Thr Ser	Gly Thr Pro Val	Ser Lys Pro			
	995	1000	1005			
Gly Pro Ser Ala Ala	Ser Pro Leu Leu	Val Leu Phe Thr	Leu Asn Phe			
	1010	1015	1020			
Thr Ile Thr Asn Leu	Arg Tyr Glu Glu	Asn Met Gln His	Pro Gly Ser			
1025	1030	1035	1040			
Arg Lys Phe Asn Thr	Thr Glu Arg Val	Leu Gln Gly Leu	Leu Arg Ser			
	1045	1050	1055			
Leu Phe Lys Ser Thr	Ser Val Gly Pro	Leu Tyr Ser Gly	Cys Arg Leu			
	1060	1065	1070			
Thr Leu Leu Arg Pro	Glu Lys Asp Gly	Thr Ala Thr Gly	Val Asp Ala			
	1075	1080	1085			
Ile Cys Thr His His	Pro Asp Pro Lys	Ser Pro Arg Leu	Asp Arg Glu			
	1090	1095	1100			
Gln Leu Tyr Trp Glu	Leu Ser Gln Leu	Thr His Asn Ile	Thr Glu Leu			
1105	1110	1115	1120			
Gly Pro Tyr Ala Leu	Asp Asn Asp Ser	Leu Phe Val Asn	Gly Phe Thr			
	1125	1130	1135			
His Arg Ser Ser Val	Ser Thr Thr Ser	Thr Pro Gly Thr	Pro Thr Val			
	1140	1145	1150			
Tyr Leu Gly Ala Ser	Lys Thr Pro Ala	Ser Ile Phe Gly	Pro Ser Ala			
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Ala Ser His Leu Leu	Ile Leu Phe Thr	Leu Asn Phe Thr	Ile Thr Asn			
	1170	1175	1180			
Leu Arg Tyr Glu Glu	Asn Met Trp Pro	Gly Ser Arg Lys	Phe Asn Thr			
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Thr Glu Arg Val Leu	Gln Gly Leu Leu	Arg Pro Leu Phe	Lys Asn Thr			
	1205	1210	1215			
Ser Val Gly Pro Leu	Tyr Ser Gly Cys	Arg Leu Thr Leu	Leu Arg Pro			
	1220	1225	1230			
Glu Lys Asp Gly Glu	Ala Thr Gly Val	Asp Ala Ile Cys	Thr His Arg			
	1235	1240	1245			
Pro Asp Pro Thr Gly	Pro Gly Leu Asp	Arg Glu Gln Leu	Tyr Leu Glu			
	1250	1255	1260			
Leu Ser Gln Leu Thr	His Ser Ile Thr	Glu Leu Gly Pro	Tyr Thr Leu			
1265	1270	1275	1280			
Asp Arg Asp Ser Leu	Tyr Val Asn Gly	Phe Thr His Arg	Ser Ser Val			
	1285	1290	1295			
Pro Thr Thr Ser Thr	Gly Val Val Ser	Glu Glu Pro Phe	Thr Leu Asn			
	1300	1305	1310			
Phe Thr Ile Asn Asn	Leu Arg Tyr Met	Ala Asp Met Gly	Gln Pro Gly			
	1315	1320	1325			
Ser Leu Lys Phe Asn	Ile Thr Asp Asn	Val Met Gln His	Leu Leu Ser			

1330	1335	1340
Pro Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg		
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Val Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp		1360
	1365	1370
Leu Leu Cys Thr Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile		1375
	1380	1385
Lys Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg		1390
	1395	1400
Leu Gly Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr		1405
	1410	1415
Asn Glu Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr		1420
1425	1430	1435
Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His		1440
	1445	1450
Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser		1455
	1460	1465
Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val		1470
	1475	1480
Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro		1485
	1490	1495
Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly		1500
1505	1510	1515
Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His Pro Asp Pro Val		1520
	1525	1530
Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu Leu Ser Gln Leu		1535
	1540	1545
Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser		1550
	1555	1560
Leu Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu		1565
	1570	1575
Tyr Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu Ser Asn Pro Asp		1580
1585	1590	1595
Pro Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys		1600
	1605	1610
Val Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp Thr Phe Arg Phe		1615
	1620	1625
Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu Val Thr Val Lys		1630
	1635	1640
Ala Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu Val Glu Gln Val Phe		1645
	1650	1655
Leu Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu Gly Ser Thr Tyr		1660
1665	1670	1675
Gln Leu Val Asp Ile His Val Thr Glu Met Glu Ser Ser Val Tyr Gln		1680
	1685	1690
Pro Thr Ser Ser Ser Ser Thr Gln His Phe Tyr Pro Asn Phe Thr Ile		1695
	1700	1705
Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn		1710
	1715	1720
Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe		1725
1730	1735	1740
Arg Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr		1745
	1750	1755
Phe Arg Ser Val Pro Asn Arg His His Thr Gly Val Asp Ser Leu Cys		1760
	1765	1770
Asn Phe Ser Pro Leu Ala Arg Arg Val Asp Arg Val Ala Ile Tyr Glu		1775
	1780	1785
Glu Phe Leu Arg Met Thr Arg Asn Gly Thr Gln Leu Gln Asn Phe Thr		1790

233

1795	1800	1805
Leu Asp Arg Ser Ser Val	Leu Val Asp Gly Tyr	Ser Pro Asn Arg Asn
1810	1815	1820
Glu Pro Leu Thr Gly Asn Ser Asp	Leu Pro Phe Trp Ala Val Ile Leu	
1825	1830	1835
Ile Gly Leu Ala Gly Leu Leu Gly	Leu Ile Thr Cys Leu Ile Cys Gly	1840
	1845	1850
Val Leu Val Thr Thr Arg Arg Arg	Lys Lys Glu Gly Glu Tyr Asn Val	
	1860	1865
Gln Gln Gln Cys Pro Gly Tyr Tyr	Gln Ser His Leu Asp Leu Glu Asp	1870
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Leu Gln		1885
1890		

<210> 218

<211> 4939

<212> DNA

<213> Homo sapiens

<400> 218

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ctcctgagat caagcaatcc gccacctca gcctcccaa gtgctgagat cacaggcgtg 4020
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```

<210> 221

<211> 689

<212> PRT

<213> Homo sapiens

<400> 221

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Met Ala Pro Trp Pro Glu Leu Gly Asp Ala Gln Pro Asn Pro Asp Lys
 1          5          10          15
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          20          25          30
Lys Glu Thr Asn Lys Asn Asn Thr Glu Ala Pro Val Thr Lys Ile Glu
          35          40          45
Leu Leu Pro Ser Tyr Ser Thr Ala Thr Leu Ile Asp Glu Pro Thr Glu
          50          55          60
Val Asp Asp Pro Trp Asn Leu Pro Thr Leu Gln Asp Ser Gly Ile Lys
65          70          75          80
Trp Ser Glu Arg Asp Thr Lys Gly Lys Ile Leu Cys Phe Phe Gln Gly
          85          90          95
Ile Gly Arg Leu Ile Leu Leu Leu Gly Phe Leu Tyr Phe Phe Val Cys
          100          105          110
Ser Leu Asp Ile Leu Ser Ser Ala Phe Gln Leu Val Gly Gly Lys Met
          115          120          125
Ala Gly Gln Phe Phe Ser Asn Ser Ser Ile Met Ser Asn Pro Leu Leu
          130          135          140
Gly Leu Val Ile Gly Val Leu Val Thr Val Leu Val Gln Ser Ser Ser
145          150          155          160
Thr Ser Thr Ser Ile Val Val Ser Met Val Ser Ser Ser Leu Leu Thr
          165          170          175
Val Arg Ala Ala Ile Pro Ile Ile Met Gly Ala Asn Ile Gly Thr Ser
          180          185          190
Ile Thr Asn Thr Ile Val Ala Leu Met Gln Val Gly Asp Arg Ser Glu
          195          200          205
Phe Arg Arg Ala Phe Ala Gly Ala Thr Val His Asp Phe Phe Asn Trp

```

240

210	215	220
Leu Ser Leu Leu Val	Leu Leu Pro Val Glu	Val Ala Thr His Tyr Leu
225	230	235
Glu Ile Ile Thr Gln	Leu Ile Val Glu Ser Phe	His Phe Lys Asn Gly
245	250	255
Glu Asp Ala Pro Asp	Leu Leu Lys Val Ile Thr	Lys Pro Phe Thr Lys
260	265	270
Leu Ile Val Gln Leu	Asp Lys Lys Val Ile Ser	Gln Ile Ala Met Asn
275	280	285
Asp Glu Lys Ala Lys	Asn Lys Ser Leu Val Lys	Ile Trp Cys Lys Thr
290	295	300
Phe Thr Asn Lys Thr	Gln Ile Asn Val Thr Val	Pro Ser Thr Ala Asn
305	310	315
Cys Thr Ser Pro Ser	Leu Cys Trp Thr Asp	Gly Ile Gln Asn Trp Thr
325	330	335
Met Lys Asn Val Thr	Tyr Lys Glu Asn Ile Ala	Lys Cys Gln His Ile
340	345	350
Phe Val Asn Phe His	Ileu Pro Asp Leu Ala	Val Gly Thr Ile Leu Leu
355	360	365
Ile Leu Ser Leu Leu	Val Leu Cys Gly Cys Leu	Ile Met Ile Val Lys
370	375	380
Ile Leu Gly Ser Val	Leu Lys Gly Gln Val Ala	Thr Val Ile Lys Lys
385	390	395
Thr Ile Asn Thr Asp	Phe Pro Phe Pro Phe	Ala Trp Leu Thr Gly Tyr
405	410	415
Leu Ala Ile Leu Val	Gly Ala Gly Met Thr	Phe Ile Val Gln Ser Ser
420	425	430
Ser Val Phe Thr Ser	Ala Leu Thr Pro Leu	Ile Gly Val Ile
435	440	445
Thr Ile Glu Arg Ala	Tyr Pro Leu Thr Leu	Gly Ser Asn Ile Gly Thr
450	455	460
Thr Thr Thr Ala Ile	Leu Ala Ala Leu Ala	Ser Pro Gly Asn Ala Leu
465	470	475
Arg Ser Ser Leu Gln	Ile Ala Leu Cys His	Phe Phe Phe Asn Ile Ser
485	490	495
Gly Ile Leu Leu Trp	Tyr Pro Ile Pro Phe	Thr Arg Leu Pro Ile Arg
500	505	510
Met Ala Lys Gly Leu	Gly Asn Ile Ser Ala	Lys Tyr Arg Trp Phe Ala
515	520	525
Val Phe Tyr Leu Ile	Ile Phe Phe Phe Leu	Ile Pro Leu Thr Val Phe
530	535	540
Gly Leu Ser Leu Ala	Gly Trp Arg Val Leu	Val Gly Val Gly Val Pro
545	550	555
Val Val Phe Ile Ile	Ile Leu Val Leu Cys	Leu Arg Leu Leu Gln Ser
565	570	575
Arg Cys Pro Arg Val	Leu Pro Lys Lys Leu	Gln Asn Trp Asn Phe Leu
580	585	590
Pro Leu Trp Met Arg	Ser Leu Lys Pro Trp	Asp Ala Val Val Ser Lys
595	600	605
Phe Thr Gly Cys Phe	Gln Met Arg Cys Cys	Cys Cys Arg Val Cys
610	615	620
Cys Arg Ala Cys Cys	Leu Leu Cys Gly Cys	Pro Lys Cys Cys Arg Cys
625	630	635
Ser Lys Cys Cys Glu	Asp Leu Glu Glu Ala	Gln Glu Gly Gln Asp Val
645	650	655
Pro Val Lys Ala Pro	Glu Thr Phe Asp Asn	Ile Thr Ile Ser Arg Glu
660	665	670
Ala Gln Gly Glu Val	Pro Ala Ser Asp Ser	Lys Thr Glu Cys Thr Ala

241

675 680 685
 Leu

<210> 222
 <211> 771
 <212> DNA
 <213> Homo sapiens

<400> 222
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 gatccggatt caccattgtt cagagaagaa aactacgcct cagccctgag caatgtagta 180
 actttttatgt ggaaaagtat ggaaaaatgt ttttccccaa cttaacagct tacatgagtt 240
 ctggaccact tgtcgccatg atattagcta gacataaagc catctottat tggttagaac 300
 ttttgggacc aaataatagc ttagtagcga aggagacaca tccagacagt ctgaggggcaa 360
 tttatggcac agatgacctt aggaatgcac ttcattgggag taatgacttt gctgctgcgg 420
 aaagagaaat acgttttatg tttcctgaag tgattgttga gccatttcca attggacaag 480
 ctgctaagga ctattttaa tttacatataa tgccaactct gcttgaagga ctcacagagc 540
 tttgtaagca aaaaccagca gaccttttga tttggctagc tgattggctg ctgaaaaata 600
 atcctaacaa acccaaactt tgtcaccatc caattgtaga agaacccttat taaaaaaaaa 660
 atcctcgaaa gaacaaatca tgaactatct tattataaaa ggctgtactt ctactgtttg 720
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<210> 223
 <211> 212
 <212> PRT
 <213> Homo sapiens

<400> 223
 Met Glu Ile Ser Met Pro Pro Pro Gln Ile Tyr Val Glu Lys Thr Leu
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 Ala Ile Ile Lys Pro Asp Ile Val Asp Lys Glu Glu Glu Ile Gln Asp
 20 25 30
 Ile Ile Leu Arg Ser Gly Phe Thr Ile Val Gln Arg Arg Lys Leu Arg
 35 40 45
 Leu Ser Pro Glu Gln Cys Ser Asn Phe Tyr Val Glu Lys Tyr Gly Lys
 50 55 60
 Met Phe Phe Pro Asn Leu Thr Ala Tyr Met Ser Ser Gly Pro Leu Val
 65 70 75 80
 Ala Met Ile Leu Ala Arg His Lys Ala Ile Ser Tyr Trp Leu Glu Leu
 85 90 95
 Leu Gly Pro Asn Asn Ser Leu Val Ala Lys Glu Thr His Pro Asp Ser
 100 105 110
 Leu Arg Ala Ile Tyr Gly Thr Asp Asp Leu Arg Asn Ala Leu His Gly
 115 120 125
 Ser Asn Asp Phe Ala Ala Ala Glu Arg Glu Ile Arg Phe Met Phe Pro
 130 135 140
 Glu Val Ile Val Glu Pro Ile Pro Ile Gly Gln Ala Ala Lys Asp Tyr
 145 150 155 160
 Leu Asn Leu His Ile Met Pro Thr Leu Leu Glu Gly Leu Thr Glu Leu
 165 170 175
 Cys Lys Gln Lys Pro Ala Asp Pro Leu Ile Trp Leu Ala Asp Trp Leu
 180 185 190
 Leu Lys Asn Asn Pro Asn Lys Pro Lys Leu Cys His His Pro Ile Val
 195 200 205
 Glu Glu Pro Tyr

210

<210> 224
 <211> 3463
 <212> DNA
 <213> Homo sapiens

<400> 224

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gcaatgctgc cgccaccgcc accaccactt acgtcctcgc ttcccgcagc cgggtcaaaag 180
ccttctcttg agtcgcagcc ccccatggag gccagtcctc tcccgggggc tccgcccccc 240
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aaacagaaaa aaaagaaaag aaaggaacca gtttttact tttttgtga tacctgtgat 540
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gaagaaagaa ggaaaaacta tccaactctg gccaatattg aaaggaagaa gaagttaaaa 780
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<210> 225

<211> 495

<212> PRT

<213> Homo sapiens

<400> 225

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Met Ala Glu Pro Thr Ser Asp Phe Glu Thr Pro Ile Gly Trp His Ala
 1          5          10          15
Ser Pro Glu Leu Thr Pro Thr Leu Gly Pro Leu Ser Asp Thr Ala Pro
          20          25          30
Pro Arg Asp Arg Trp Met Phe Trp Ala Met Leu Pro Pro Pro Pro Pro
          35          40          45
Pro Leu Thr Ser Ser Leu Pro Ala Ala Gly Ser Lys Pro Ser Ser Glu
 50          55          60
Ser Gln Pro Pro Met Glu Ala Gln Ser Leu Pro Gly Ala Pro Pro Pro
 65          70          75          80
Phe Asp Ala Gln Ile Leu Pro Gly Ala Gln Pro Pro Phe Asp Ala Gln
          85          90          95
Ser Pro Leu Asp Ser Gln Pro Gln Pro Ser Gly Gln Pro Trp Asn Phe
          100          105          110
His Ala Ser Thr Ser Trp Tyr Trp Arg Gln Ser Ser Asp Arg Phe Pro
          115          120          125
Arg His Gln Lys Ser Phe Asn Pro Ala Val Lys Asn Ser Tyr Tyr Pro
          130          135          140
Arg Lys Tyr Asp Ala Lys Phe Thr Asp Phe Ser Leu Pro Pro Ser Arg
          145          150          155          160
Lys Gln Lys Lys Lys Lys Arg Lys Glu Pro Val Phe His Phe Phe Cys
          165          170          175
Asp Thr Cys Asp Arg Gly Phe Lys Asn Gln Glu Lys Tyr Asp Lys His
          180          185          190
Met Ser Glu His Thr Lys Cys Pro Glu Leu Asp Cys Ser Phe Thr Ala
          195          200          205
His Glu Lys Ile Val Gln Phe His Trp Arg Asn Met His Ala Pro Gly
          210          215          220
Met Lys Lys Ile Lys Leu Asp Thr Pro Glu Glu Ile Ala Arg Trp Arg
          225          230          235          240
Glu Glu Arg Arg Lys Asn Tyr Pro Thr Leu Ala Asn Ile Glu Arg Lys
          245          250          255
Lys Lys Leu Lys Leu Glu Lys Glu Lys Arg Gly Ala Val Leu Thr Thr
          260          265          270
Thr Gln Tyr Gly Lys Met Lys Gly Met Ser Arg His Ser Gln Met Ala
          275          280          285
Lys Ile Arg Ser Pro Gly Lys Asn His Lys Trp Lys Asn Asp Asn Ser
          290          295          300
Arg Gln Arg Ala Val Thr Gly Ser Gly Ser His Leu Cys Asp Leu Lys
          305          310          315          320
Leu Glu Gly Pro Pro Glu Ala Asn Ala Asp Pro Leu Gly Val Leu Ile
          325          330          335

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244

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Asn Ser Asp Ser Glu Ser Asp Lys Glu Glu Lys Pro Gln His Ser Val
      340                      345                      350
Ile Pro Lys Glu Val Thr Pro Ala Leu Cys Ser Leu Met Ser Ser Tyr
      355                      360                      365
Gly Ser Leu Ser Gly Ser Glu Ser Glu Pro Glu Glu Thr Pro Ile Lys
      370                      375                      380
Thr Glu Ala Asp Val Leu Ala Glu Asn Gln Val Leu Asp Ser Ser Ala
385                      390                      395                      400
Pro Lys Ser Pro Ser Gln Asp Val Lys Ala Thr Val Arg Asn Phe Ser
      405                      410                      415
Glu Ala Lys Ser Glu Asn Arg Lys Lys Ser Phe Glu Lys Thr Asn Pro
      420                      425                      430
Lys Arg Lys Lys Asp Tyr His Asn Tyr Gln Thr Leu Phe Glu Pro Arg
      435                      440                      445
Thr His His Pro Tyr Leu Leu Glu Met Leu Leu Ala Pro Asp Ile Arg
      450                      455                      460
His Glu Arg Asn Val Ile Leu Gln Cys Val Arg Tyr Ile Ile Lys Lys
465                      470                      475                      480
Asp Phe Phe Gly Leu Asp Thr Asn Ser Ala Lys Ser Lys Asp Val
      485                      490                      495

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<210> 226
 <211> 942
 <212> DNA
 <213> Homo sapiens

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<400> 226
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gccacatggc taaaccctga cccatctcag aagcagaatc tcctagcccc acagaatgct 180
gtgtcctctg aagaaaccaa tgactttaaa caagagaccc ttccaagtaa gtccaacgaa 240
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gactccattg actcgaacga ctctgatgat gtagatgaca ctgatgatgc tcaccagtct 360
gatgagtcct accattctga tgaatctgat gaactggtea ctgattttcc caccgacctg 420
ccagcaaccg aagttttcac tocagttgtc cccacagtag acacatatga tggccgaggt 480
gatagtgtgg tttatggact gaggtcaaaa tctaagaagt ttgcagacc tgacatccag 540
taccctgatg ctacagacga gcacatcacc tcacacatgg aaagcgagga gttgaatggt 600
gcatacaagg ccatccccgt tgcccaggac ctgaacgcgc cttctgattg ggacagccgt 660
gggaaggaca gttatgaaac gagtcagctg gatgaccaga gtgctgaagc ccacagccac 720
aagcagtcca gattatataa gcggaagct aatgatgaga gcaatgagca ttccgatgtg 780
attgatagtc aggaactttc caaagtcagc cgtgaattcc acagccatga atttcacagc 840
catgaagata tgctggttgt agaccccaaa agtaaggaag aagataaaca cctgaaattt 900
cgtattttctc atgaattaga tagtgcatct tctgaggtca at 942

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<210> 227
 <211> 314
 <212> PRT
 <213> Homo sapiens

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<400> 227
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  1           5           10          15
Ile Pro Val Lys Gln Ala Asp Ser Gly Ser Ser Glu Glu Lys Gln Leu
      20           25           30
Tyr Asn Lys Tyr Pro Asp Ala Val Ala Thr Trp Leu Asn Pro Asp Pro
      35           40           45
Ser Gln Lys Gln Asn Leu Leu Ala Pro Gln Asn Ala Val Ser Ser Glu

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245

50	55	60
Glu Thr Asn Asp Phe Lys Gln Glu Thr Leu Pro Ser Lys Ser Asn Glu		
65	70	75
Ser His Asp His Met Asp Asp Met Asp Asp Glu Asp Asp Asp Asp His		80
	85	90
Val Asp Ser Gln Asp Ser Ile Asp Ser Asn Asp Ser Asp Asp Val Asp		95
	100	105
Asp Thr Asp Asp Ser His Gln Ser Asp Glu Ser His His Ser Asp Glu		110
	115	120
Ser Asp Glu Leu Val Thr Asp Phe Pro Thr Asp Leu Pro Ala Thr Glu		125
	130	135
Val Phe Thr Pro Val Val Pro Thr Val Asp Thr Tyr Asp Gly Arg Gly		140
	145	150
Asp Ser Val Val Tyr Gly Leu Arg Ser Lys Ser Lys Lys Phe Arg Arg		155
	160	165
Pro Asp Ile Gln Tyr Pro Asp Ala Thr Asp Glu His Ile Thr Ser His		170
	175	180
Met Glu Ser Glu Glu Leu Asn Gly Ala Tyr Lys Ala Ile Pro Val Ala		185
	190	195
Gln Asp Leu Asn Ala Pro Ser Asp Trp Asp Ser Arg Gly Lys Asp Ser		200
	205	210
Tyr Glu Thr Ser Gln Leu Asp Asp Gln Ser Ala Glu Ala His Ser His		215
	220	225
Lys Gln Ser Arg Leu Tyr Lys Arg Lys Ala Asn Asp Glu Ser Asn Glu		230
	235	240
His Ser Asp Val Ile Asp Ser Gln Glu Leu Ser Lys Val Ser Arg Glu		245
	250	255
Phe His Ser His Glu Phe His Ser His Glu Asp Met Leu Val Val Asp		260
	265	270
Pro Lys Ser Lys Glu Glu Asp Lys His Leu Lys Phe Arg Ile Ser His		275
	280	285
Glu Leu Asp Ser Ala Ser Ser Glu Val Asn		290
	295	300
305	310	

<210> 228

<211> 1524

<212> DNA

<213> Homo sapiens

<400> 228

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ggcatcacct	gtgccatacc	agttaaacag	gctgattctg	gaagttctga	ggaaaagcag	180
ctttacaaca	aatacccaga	tgctgtggcc	acatggctaa	acctgaccc	atctcagaag	240
cagaatctcc	tagccccaca	gaccttcca	agtaagtcca	acgaaagcca	tgaccacatg	300
gatgatatgg	atgatgaaga	tgatgatgac	catgtggaca	gccaggactc	cattgactcg	360
aacgactctg	atgatgtaga	tgacactgat	gattctcacc	agtctgatga	gtctcaccat	420
tctgatgaat	ctgatgaact	ggtcactgat	tttcccacgg	acctgccagc	aaccgaagtt	480
ttcactccag	ttgtccccac	agtagacaca	tatgatggcc	gagggtgatag	tgtggtttat	540
ggactgaggt	caaaatctaa	gaagtttcgc	agacctgaca	tccagtaccc	tgatgctaca	600
gacgaggaca	tcacctcaca	catggaaage	gaggagttga	atgggtgcata	caaggccatc	660
cccgttgccc	aggacctgaa	cgcgccttct	gattgggaca	gccgtgggaa	ggacagttat	720
gaaacgagtc	agctggatga	ccagagtgc	gaaaccacaca	gccacaagca	gtccagatta	780
tataagcgga	aagccaatga	tgagagcaat	gagcattccg	atgtgattga	tagtcaggaa	840
ctttccaaag	tcagcogtga	attccacagc	catgaatttc	acagccatga	agatatgctg	900
gtttagtagc	ccaaaagtaa	ggaagaagat	aaacacctga	aatttcgtat	ttctcatgaa	960
ttagatagt	catcttctga	ggtcaattaa	aaggagaaaa	aatacaattt	ctcactttgc	1020

246

```

atttagtcaa aagaaaaaat gctttatagc aaaatgaaag agaacatgaa atgcttcttt 1080
ctcagtttat tgggttgaatg tgtatctatt tgagtcctgga aataactaat gtgtttgata 1140
attagtttag tttgtggcctt catggaaaact ccctgtaaac taaaagcttc aggggttatgt 1200
ctatgttcat totatagaag aaatgcaaac tatcactgta ttttaatat ttgtattctc 1260
tcatgaatag aaatttatgt agaagcaaac aaaatacttt taccactta aaaagagaat 1320
ataacatttt atgtcactat aatcttttgt tttttaagtt agtgtatatt ttgttgatgat 1380
tatctttttg tgggtgtgaat aaatctttta tcttgaatgt aataagaatt tgggtggtgtc 1440
aattgcttat ttgttttccc acggttggtcc agcaattaat aaaacataac cttttttact 1500
gcctaaaaaa aaaaaaaaaa aaaa                                     1524

```

<210> 229

<211> 300

<212> PRT

<213> Homo sapiens

<400> 229

```

Met Arg Ile Ala Val Ile Cys Phe Cys Leu Leu Gly Ile Thr Cys Ala
 1           5           10          15
Ile Pro Val Lys Gln Ala Asp Ser Gly Ser Ser Glu Glu Lys Gln Leu
          20          25          30
Tyr Asn Lys Tyr Pro Asp Ala Val Ala Thr Trp Leu Asn Pro Asp Pro
          35          40          45
Ser Gln Lys Gln Asn Leu Leu Ala Pro Gln Thr Leu Pro Ser Lys Ser
          50          55          60
Asn Glu Ser His Asp His Met Asp Asp Met Asp Asp Glu Asp Asp Asp
65          70          75          80
Asp His Val Asp Ser Gln Asp Ser Ile Asp Ser Asn Asp Ser Asp Asp
          85          90          95
Val Asp Asp Thr Asp Asp Ser His Gln Ser Asp Glu Ser His His Ser
          100         105         110
Asp Glu Ser Asp Glu Leu Val Thr Asp Phe Pro Thr Asp Leu Pro Ala
          115         120         125
Thr Glu Val Phe Thr Pro Val Val Pro Thr Val Asp Thr Tyr Asp Gly
          130         135         140
Arg Gly Asp Ser Val Val Tyr Gly Leu Arg Ser Lys Ser Lys Lys Phe
145          150         155         160
Arg Arg Pro Asp Ile Gln Tyr Pro Asp Ala Thr Asp Glu Asp Ile Thr
          165         170         175
Ser His Met Glu Ser Glu Glu Leu Asn Gly Ala Tyr Lys Ala Ile Pro
          180         185         190
Val Ala Gln Asp Leu Asn Ala Pro Ser Asp Trp Asp Ser Arg Gly Lys
          195         200         205
Asp Ser Tyr Glu Thr Ser Gln Leu Asp Asp Gln Ser Ala Glu Thr His
          210         215         220
Ser His Lys Gln Ser Arg Leu Tyr Lys Arg Lys Ala Asn Asp Glu Ser
225          230         235         240
Asn Glu His Ser Asp Val Ile Asp Ser Gln Glu Leu Ser Lys Val Ser
          245         250         255
Arg Glu Phe His Ser His Glu Phe His Ser His Glu Asp Met Leu Val
          260         265         270
Val Asp Pro Lys Ser Lys Glu Glu Asp Lys His Leu Lys Phe Arg Ile
          275         280         285
Ser His Glu Leu Asp Ser Ala Ser Ser Glu Val Asn
          290         295         300

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<210> 230

<211> 861

<212> DNA

<213> Homo sapiens

<400> 230

```

atgagaattg cagtgatttg cttttgcctc ctaggcatca cctgtgccat accagttaaa 60
caggctgatt ctggaagtgc tgaggaaaag cagaatgctg tgctctctga agaaaccaat 120
gacttttaaac aagagaccct tccaagtaag tccaacgaaa gccatgacca catggatgat 180
atggatgatg aagatgatga tgaccatgtg gacagccagg actccattga ctogaacgac 240
tgtgatgatg tagatgacac tgatgattct caccagtctg atgagtctca ccattctgat 300
gaatctgatg aactggtcac tgattttccc acggacctgc cagcaaccga agtttttact 360
ccagttgtcc ccacagtaga cacatatgat ggccgaggtg atagtgtggt ttatggactg 420
aggtcaaaat ctaagaagtt tcgcagacct gacatccagt accctgatgc tacagacgag 480
cacatcacct cacacatgga aagcgaggag ttgaatggtg catacaaggc catccccgtt 540
gcccaggacc tgaacgcgcc ttctgattgg gacagccgtg ggaaggacag ttatgaaacg 600
agtcagctgg atgaccagag tgctgaagcc cacagccaca agcagtccag attatataag 660
cggaaagcta atgatgagag caatgagcat tccgatgtga ttgatagtca ggaactttcc 720
aaagtcagcc gtgaattcca cagccatgaa ttccacagcc atgaagatat gctgggttga 780
gaccccaaaa gtaaggaaga agataaacac ctgaaatttc gtattttctca tgaattagat 840
agtgcattct ctgaggtcaa t                                     861

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<210> 231

<211> 287

<212> PRT

<213> Homo sapiens

<400> 231

```

Met Arg Ile Ala Val Ile Cys Phe Cys Leu Leu Gly Ile Thr Cys Ala
 1             5             10             15
Ile Pro Val Lys Gln Ala Asp Ser Gly Ser Ser Glu Glu Lys Gln Asn
      20             25             30
Ala Val Ser Ser Glu Glu Thr Asn Asp Phe Lys Gln Glu Thr Leu Pro
      35             40             45
Ser Lys Ser Asn Glu Ser His Asp His Met Asp Asp Met Asp Asp Glu
      50             55             60
Asp Asp Asp Asp His Val Asp Ser Gln Asp Ser Ile Asp Ser Asn Asp
      65             70             75             80
Ser Asp Asp Val Asp Asp Thr Asp Asp Ser His Gln Ser Asp Glu Ser
      85             90             95
His His Ser Asp Glu Ser Asp Glu Leu Val Thr Asp Phe Pro Thr Asp
      100            105            110
Leu Pro Ala Thr Glu Val Phe Thr Pro Val Val Pro Thr Val Asp Thr
      115            120            125
Tyr Asp Gly Arg Gly Asp Ser Val Val Tyr Gly Leu Arg Ser Lys Ser
      130            135            140
Lys Lys Phe Arg Arg Pro Asp Ile Gln Tyr Pro Asp Ala Thr Asp Glu
      145            150            155            160
His Ile Thr Ser His Met Glu Ser Glu Glu Leu Asn Gly Ala Tyr Lys
      165            170            175
Ala Ile Pro Val Ala Gln Asp Leu Asn Ala Pro Ser Asp Trp Asp Ser
      180            185            190
Arg Gly Lys Asp Ser Tyr Glu Thr Ser Gln Leu Asp Asp Gln Ser Ala
      195            200            205
Glu Ala His Ser His Lys Gln Ser Arg Leu Tyr Lys Arg Lys Ala Asn
      210            215            220
Asp Glu Ser Asn Glu His Ser Asp Val Ile Asp Ser Gln Glu Leu Ser
      225            230            235            240
Lys Val Ser Arg Glu Phe His Ser His Glu Phe His Ser His Glu Asp
      245            250            255

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248

Met Leu Val Val Asp Pro Lys Ser Lys Glu Glu Asp Lys His Leu Lys
 260 265 270
 Phe Arg Ile Ser His Glu Leu Asp Ser Ala Ser Ser Glu Val Asn
 275 280 285

<210> 232
 <211> 838
 <212> DNA
 <213> Homo sapiens

<400> 232
 ctcagagcca cccacagccg cagccatgct gtgcctcctg ctcaccctgg gcgtggccct 60
 ggtctgtggt gtcccggcca tggacatccc ccagaccaag caggacctgg agctcccaaa 120
 gttggcaggg acctggcact ccatggccat ggcgaccaac aacatctccc tcatggcgac 180
 actgaaggcc cctctgaggg tccacatcac ctctactgtt cccacccccg aggacaacct 240
 ggagatcggt ctgcacagat gggagaacaa cagctgtggt gagaagaagg tccttggaga 300
 gaagactgag aatccaaaga agttcaagat caactatacg gtggcgaaac aggccacgct 360
 gctcgatact gactacgaca atttctgtt tctctgccta caggacacca ccacccccat 420
 ccagagcatg atgtgccagt acctggccag agtctctgtg gaggacgatg agatcatgca 480
 gggattcatc agggctttca ggcccctgcc caggcaccta tggtaacttg tggaacttgaa 540
 acagatggaa gagccgtgcc gtttctaggt gagctcctgc ctggtcctgc ctctgggctc 600
 acctccgcct ccaggaagac cagactccca cccttcaca cctccagagc agtgggactt 660
 cctcctgccc tttcaaagaa taaccacagc tcagaagacg atgacgtggt catctgtgtc 720
 gccatcccct tcctgctgca cacctgcacc acggccatgg ggaggctgct ccctgggggc 780
 agagtctctg gcagaggtta ttaataaacc ctgaggagcat gaaaaaaaaa aaaaaaaa 838

<210> 233
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 233
 Met Leu Cys Leu Leu Leu Thr Leu Gly Val Ala Leu Val Cys Gly Val
 1 5 10 15
 Pro Ala Met Asp Ile Pro Gln Thr Lys Gln Asp Leu Glu Leu Pro Lys
 20 25 30
 Leu Ala Gly Thr Trp His Ser Met Ala Met Ala Thr Asn Asn Ile Ser
 35 40 45
 Leu Met Ala Thr Leu Lys Ala Pro Leu Arg Val His Ile Thr Ser Leu
 50 55 60
 Leu Pro Thr Pro Glu Asp Asn Leu Glu Ile Val Leu His Arg Trp Glu
 65 70 75 80
 Asn Asn Ser Cys Val Glu Lys Lys Val Leu Gly Glu Lys Thr Glu Asn
 85 90 95
 Pro Lys Lys Phe Lys Ile Asn Tyr Thr Val Ala Asn Glu Ala Thr Leu
 100 105 110
 Leu Asp Thr Asp Tyr Asp Asn Phe Leu Phe Leu Cys Leu Gln Asp Thr
 115 120 125
 Thr Thr Pro Ile Gln Ser Met Cys Gln Tyr Leu Ala Arg Val Leu
 130 135 140
 Val Glu Asp Asp Glu Ile Met Gln Gly Phe Ile Arg Ala Phe Arg Pro
 145 150 155 160
 Leu Pro Arg His Leu Trp Tyr Leu Leu Asp Leu Lys Gln Met Glu Glu
 165 170 175
 Pro Cys Arg Phe
 180

<210> 234
 <211> 851
 <212> DNA
 <213> Homo sapiens

<400> 234
 ggctccagag ctcagagcca cccacagccg cagccatgct gtgcctcctg ctcaacctgg 60
 gcgtggccct ggtctgtggt gtcccgccca tggacatccc ccagaccaag caggacctgg 120
 agctcccaaa gttggcaggg acctggcact ccatggccat ggcgaccaac aacatctccc 180
 tcatggcgac actgaaggcc cctctgaggg tccacatcac ctcaactgtt cccacccccg 240
 aggacaacct ggagatcgtt ctgcacagat gggagaacaa cagctgtgtt gagaagaagg 300
 tccttgagaga gaagactgag aatccaaaga agttcaagat caactatacg gtggcgaaacg 360
 aggccacgct gctcgatact gactaogaca atttctgtt tctctgccta caggacacca 420
 ccacccccat ccagagcatg atgtgccagt acctggccag agtcctggtg gaggacgatg 480
 agatcatgca gggattcatc agggctttta ggccctgcc caggcaccta tgggtacttg 540
 tggacttgaa acagatggaa gagccgtgcc gttcttaggt gagctcctgc ctggtcctgc 600
 ctctgggtg acctgtaaac ccaacagctc acctccgct ccaggaagac cagactccca 660
 ccctccaca cctccagagc agtgggactt cctcctgcc tttcaaagaa taaccacagc 720
 tcagaagacg atgacgtggt catctgtgtc gccatccct tctgtctgca cacctgcacc 780
 acggccatgg ggaggctgct ccctgggggc agagtctctg gcagaggtta ttaataaacc 840
 cttggagcat g 851

<210> 235
 <211> 811
 <212> DNA
 <213> Homo sapiens

<400> 235
 catccctctg gctccagagc tcagagccac ccacagccgc agccatgctg tgccctcctgc 60
 tcacctggg cgtggccctg gtctgtggtg tcccgccat ggacatcccc cagaccaagc 120
 aggacctgga gctcccaaag ttggcaggga cctggcactc catggccatg gcgaccaaca 180
 acatctccct catggcgaca ctgaaggccc ctctgagggc ccacatcacc tcaactgttg 240
 ccacccccga ggacaacctg gagatcgttc tgcacagatg ggagaacaac agctgtgttg 300
 agaagaaggt ccttgagag aagactggga atccaaagaa gttcaagatc aactatacgg 360
 tggcgaaoga gcccacgctg ctcgatactg actacgacaa tttcctgttt ctctgcctac 420
 aggacaccac ccccccatc cagagcatga tgtgccagta cctggccaga gtccctgggtg 480
 aggacgatga gatcatgcag ggattcatca gggctttcag gccctgcc aggcacctat 540
 ggtacttgct ggacttgaaa cagatggaag agccgtgccg tttctagctc acctccgct 600
 ccaggaagac cagactccca cccttccaca cctccagagc agtgggactt cctcctgcc 660
 tttcaaagaa taaccacagc tcagaagacg atgacgtggt catctgtgtc gccatccct 720
 tctgtctgca cacctgcacc attgccatgg ggaggctgct ccctgggggc agagtctctg 780
 gcagaggtta ttaataaacc cttggagcat g 811

<210> 236
 <211> 850
 <212> DNA
 <213> Homo sapiens

<400> 236
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 tcacctggg cgtggccctg gtctgtggtg tcccgccat ggacatcccc cagaccaagc 120
 aggacctgga gctcccaaag ttggcaggga cctggcactc catggccatg gcgaccaaca 180
 acatctccct catggcgaca ctgaaggccc ctctgagggc ccacatcacc tcaactgttg 240
 ccacccccga ggacaacctg gagatcgttc tgcacagatg ggagaacaac agctgtgttg 300
 agaagaaggt ccttgagag aagactgrga atccaaagaa gttcaagatc aactatacgg 360
 tggcgaaoga ggccacgctg ctcgatactg actacgacaa tttcctgttt ctctgcctac 420
 aggacaccac ccccccatc cagagcatga tgtgccagta cctggccaga gtccctgggtg 480

250

```

aggacgatga gatcatgcag ggattcatca gggctttcag gcccctgccc aggcacctat 540
ggtacttgct ggacttgaaa cagatggaag agccgtgccg tttctagtga cctgtaaaacc 600
caacagctca cctccgcctc caggaagacc agactccac ccttccacac ctccagagca 660
gtgggaacttc ctccctgccct ttcaaagaat aaccacagct cagaagacga tgacgtggtc 720
atctgtgtcg ccatcccttt cctgctgcac acctgcacca cggccatggg gaggtgtgtc 780
cctgggggca gagtctctgg cagaggttat taataaacc ttggagcatg aaaaaaaaaa 840
aaaaaaaaaa

```

<210> 237
 <211> 598
 <212> DNA
 <213> Homo sapiens

```

<400> 237
catccctctg gctccagagc tcagagccac ccacagccgc agccatgctg tgcctcctgc 60
tcaccctggg cgtggccctg gtctgtgggtg tcccgcccat ggacatcccc cagaccaagc 120
aggacctgga gctcccaaag gacaccacca ccccatcca gagcatgatg tgccagtacc 180
tggccagagt cctggtggag gacgatgaga tcatgcaggg attcatcagg gctttcaggc 240
cctgcccag gcacctatgg tacttgctgg acttgaaaca gatggaagag cctgcccgtt 300
tctaggtgag ctccctgcctg gtcctgcctc ctgggtgacc tgtaaaccga acagctcacc 360
tcgcctcca ggaagaccag actcccaccc ttccacacct ccagagcagt gggacttctc 420
cctgcccctt caaagaataa ccacagctca gaagacgatg acgtgggtcat ctgtgtcgcc 480
atccccttcc tgctgcacac ctgcaccaag gccatgggga ggctgctccc tgggggcaga 540
gtctctggca gaggttatta ataaaccctt ggagcatgaa aaaaaaaaaa aaaaaaaa 598

```

<210> 238
 <211> 86
 <212> PRT
 <213> Homo sapiens

```

<400> 238
Met Leu Cys Leu Leu Thr Leu Gly Val Ala Leu Val Cys Gly Val
  1           5           10          15
Pro Ala Met Asp Ile Pro Gln Thr Lys Gln Asp Leu Glu Leu Pro Lys
      20           25          30
Asp Thr Thr Thr Pro Ile Gln Ser Met Met Cys Gln Tyr Leu Ala Arg
      35           40          45
Val Leu Val Glu Asp Asp Glu Ile Met Gln Gly Phe Ile Arg Ala Phe
      50           55          60
Arg Pro Leu Pro Arg His Leu Trp Tyr Leu Leu Asp Leu Lys Gln Met
      65           70          75          80
Glu Glu Pro Cys Arg Phe
      85

```

<210> 239
 <211> 814
 <212> DNA
 <213> Homo sapiens

```

<400> 239
catccctctg gctccagagc tcagagccac ccacagccgc agccatgctg tgcctcctgc 60
tcaccctggg cgtggccctg gtctgtgggtg tcccgcccat ggacatcccc cagaccaagc 120
aggacctgga gacactgaag gcccctctga ggggtccacat cacctcactg ttgcccaccc 180
ccgaggacaa cctggagatc gttctgcaca gatgggagaa caacagctgt gttgagaaga 240
aggtccttgg agagaagact grgaatccaa agaagttcaa gatcaactat acggtggcga 300
acgaggccac gctgctcgat actgactacg acaatttcct gtttctctgc ctacaggaca 360
ccaccacccc catccagagc atgatgtgcc agtacctggc cagagtcctg gtggaggacg 420

```

251

```

atgagatcat gcagggattc atcagggcgtt tcagggccct gccaggcac ctatgggtact 480
tgctggactt gaaacagatg gaagagccgt gccgtttcta ggtgagctcc tgctgggtcc 540
tgctcctgg gtgacctgta aaccaacag ctcacctcgg cctccaggaa gaccagactc 600
ccaccttcc acacctccag agcagtggga cttcctcctg ccttttcaaa gaataaccac 660
agctcagaag acgatgacgt ggcatctgt gtcgcatcc ccttcctgct gcacacctgc 720
accacggcca tggggaggct gctccctggg ggcagagtct ctggcagagg ttattaataa 780
acccttggag catgaaaaaa aaaaaaaaaa aaaa 814

```

<210> 240

<211> 158

<212> PRT

<213> Homo sapiens

<400> 240

```

Met Leu Cys Leu Leu Thr Leu Gly Val Ala Leu Val Cys Gly Val
1      5      10      15
Pro Ala Met Asp Ile Pro Gln Thr Lys Gln Asp Leu Glu Leu Pro Lys
20     25     30
Ala Pro Leu Arg Val His Ile Thr Ser Leu Leu Pro Thr Pro Glu Asp
35     40     45
Asn Leu Glu Ile Val Leu His Arg Trp Glu Asn Asn Ser Cys Val Glu
50     55     60
Lys Lys Val Leu Gly Glu Lys Thr Glu Asn Pro Lys Lys Phe Lys Ile
65     70     75     80
Asn Tyr Thr Val Ala Asn Glu Ala Thr Leu Leu Asp Thr Asp Tyr Asp
85     90     95
Asn Phe Leu Phe Leu Cys Leu Gln Asp Thr Thr Thr Pro Ile Gln Ser
100    105    110
Met Met Cys Gln Tyr Leu Ala Arg Val Leu Val Glu Asp Asp Glu Ile
115    120    125
Met Gln Gly Phe Ile Arg Ala Phe Arg Pro Leu Pro Arg His Leu Trp
130    135    140
Tyr Leu Leu Asp Leu Lys Gln Met Glu Glu Pro Cys Arg Phe
145    150    155

```

<210> 241

<211> 158

<212> PRT

<213> Homo sapiens

<400> 241

```

Met Leu Cys Leu Leu Thr Leu Gly Val Ala Leu Val Cys Gly Val
1      5      10      15
Pro Ala Met Asp Ile Pro Gln Thr Lys Gln Asp Leu Glu Thr Leu Lys
20     25     30
Ala Pro Leu Arg Val His Ile Thr Ser Leu Leu Pro Thr Pro Glu Asp
35     40     45
Asn Leu Glu Ile Val Leu His Arg Trp Glu Asn Asn Ser Cys Val Glu
50     55     60
Lys Lys Val Leu Gly Glu Lys Thr Glu Asn Pro Lys Lys Phe Lys Ile
65     70     75     80
Asn Tyr Thr Val Ala Asn Glu Ala Thr Leu Leu Asp Thr Asp Tyr Asp
85     90     95
Asn Phe Leu Phe Leu Cys Leu Gln Asp Thr Thr Thr Pro Ile Gln Ser
100    105    110
Met Met Cys Gln Tyr Leu Ala Arg Val Leu Val Glu Asp Asp Glu Ile
115    120    125

```

252

Met Gln Gly Phe Ile Arg Ala Phe Arg Pro Leu Pro Arg His Leu Trp
 130 135 140
 Tyr Leu Leu Asp Leu Lys Gln Met Glu Glu Pro Cys Arg Phe
 145 150 155

<210> 242
 <211> 2707
 <212> DNA
 <213> Homo sapiens

<400> 242
 ggacacgaggc ttccagaagga ggagagacac cgggcccagg gcaccctcgc gggcgggaccc 60
 aagcagttag ggccctgcagc cggccggcca gggcagcggc aggcgcggcc cggacctacg 120
 ggaggaagcc ccgagccctc ggccgggctgc gaggcagctcc ccggcgatgc ctcacaactc 180
 catcagatct ggccatggag ggctgaacca gctgggaggg gcctttgtga atggcagacc 240
 tctgccggaa gtggtccgcc agcgcctcgt agacctggcc caccagggtg taaggccctg 300
 cgacatctct cgccagctcc ggcctcagcca tggctgcgtc agcaagatcc ttggcaggta 360
 ctacgagact ggcagcatcc ggccctggagt gatagggggc tccaagccca aggtggccac 420
 ccccaagggtg ttggagaaga ttggggacta caaacgccag aacctacca tgtttgcctg 480
 ggagatccga gaccggctcc tggctgaggg cgtctgtgac aatgacactg tgcccagtgt 540
 cagctccatt aatagaatca tccggaccaa agtgcagcaa ccattcaacc tccctatgga 600
 cagctgcgtg gccaccaagt cctcagctcc cggacacacg ctgatcccca gctcagctgt 660
 aactcccccg gactcaccac agtcggattc cctgggctcc acctactcca tcaatgggct 720
 cctgggcctc gctcagcctg gcagcgacaa gaggaaaatg gatgacagt atcaggatag 780
 ctgcccacta agcattgact cacagagcag cagcagcgga ccccgaaagc accttcgcac 840
 ggtgcccctc agccagcacc acctcgagcc gctcgagtgc ccatttgagc ggcagcacta 900
 cccagaggcc tatgcctccc ccagccacac caaaggcgag cagggcctct acccgctgcc 960
 cttgctcaac agcaccctgg acgacgggaa ggccaccctg accccttcca acacgccact 1020
 gggcgccaac ctctcgactc accagaccta ccccggtgtg gcagatcctc actcaccctt 1080
 cgccataaag caggaaaccc ccgaggtgtc cagttctagc tccaccctt cctctttatc 1140
 tagctccgcc tttttggatc tgcagcaagt cggctccggg gtcccgccct tcaatgcctt 1200
 tccccatgct gcctccgtgt acgggcagtt cacgggccag gccctcctct caggggcgaga 1260
 gatgggtggg cccacgctgc ccggataccc accccacatc ccaccagcg gacagggcag 1320
 ctatgcctcc tctgccatcg caggcatggt ggcaaggagt gaatactctg gcaatgccta 1380
 tggccacacc cctactcct cctacagcga ggccctgggc tccccaaact ccagcttgc 1440
 gacttcccca tattattaca gtccacatc aaggccgagt gcaccgcca ccactgccac 1500
 ggcccttgac catctgtagt tgccatgggg acagtgggag cgactgagca acaggaggac 1560
 tcagcctggg acaggcccca gagagtcaca caaagggaatc tttatttatt acatgaaaaa 1620
 taaccacaag tccagcattg cggcacactc cctgtgtggt taatttaatg aaccatgaaa 1680
 gacaggatga ccttgacaaa ggccaaactg tctccaaga ctcttaatg aggggcagga 1740
 gtcccaggga aagagaacca tgccatgctg aaaaagacaa aattgaagaa gaaatgtagc 1800
 cccagccggg taccaccaa aggagagaag aagcaatagc cgaggaaact ggggggatgg 1860
 cgaatgggtc ctgcccgggc ccaaggggtg cacagggcac ctccatggct ccattattaa 1920
 cacaactcta gcaattatgg accataagca ctccctcca gccacaagt cacagcctgg 1980
 tgccgaggct ctctcacca gccaccagc gactcacctc cctcagctc ccgcctgcc 2040
 cacacggagg ctctggctgt cctctttctc cactccattt gcttggctct ttctacacct 2100
 cctcttggg catgggctga gggctggagc gactccctca gaaattccac caggctgtca 2160
 gctgacctct tttgcctgct gctgtgaagg tatagcacca cccaggtcc toctgcagt 2220
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 cgatagaggg tccctctctg ctccccagca gctcctgcc ccaaggcctg actgtatata 2520
 ctgtcaatga aactttgtt gggtaagct tcttctttc taccctccag actttggcct 2580
 ctgagtgaat tgtctctct tgcctgtgg ggctctctc cttgatgctt ctttcttttt 2640
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<210> 243
 <211> 450
 <212> PRT
 <213> Homo sapiens

<400> 243

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Gly	Gly	Ala	Phe	Val	Asn	Gly	Arg	Pro	Leu	Pro	Glu	Val	Val	Arg	Gln
			20					25					30		
Arg	Ile	Val	Asp	Leu	Ala	His	Gln	Gly	Val	Arg	Pro	Cys	Asp	Ile	Ser
		35					40					45			
Arg	Gln	Leu	Arg	Val	Ser	His	Gly	Cys	Val	Ser	Lys	Ile	Leu	Gly	Arg
	50					55					60				
Tyr	Tyr	Glu	Thr	Gly	Ser	Ile	Arg	Pro	Gly	Val	Ile	Gly	Gly	Ser	Lys
65					70					75				80	
Pro	Lys	Val	Ala	Thr	Pro	Lys	Val	Val	Glu	Lys	Ile	Gly	Asp	Tyr	Lys
				85					90					95	
Arg	Gln	Asn	Pro	Thr	Met	Phe	Ala	Trp	Glu	Ile	Arg	Asp	Arg	Leu	Leu
			100					105					110		
Ala	Glu	Gly	Val	Cys	Asp	Asn	Asp	Thr	Val	Pro	Ser	Val	Ser	Ser	Ile
		115					120					125			
Asn	Arg	Ile	Ile	Arg	Thr	Lys	Val	Gln	Gln	Pro	Phe	Asn	Leu	Pro	Met
	130					135					140				
Asp	Ser	Cys	Val	Ala	Thr	Lys	Ser	Leu	Ser	Pro	Gly	His	Thr	Leu	Ile
145					150					155				160	
Pro	Ser	Ser	Ala	Val	Thr	Pro	Pro	Glu	Ser	Pro	Gln	Ser	Asp	Ser	Leu
				165					170					175	
Gly	Ser	Thr	Tyr	Ser	Ile	Asn	Gly	Leu	Leu	Gly	Ile	Ala	Gln	Pro	Gly
		180					185						190		
Ser	Asp	Lys	Arg	Lys	Met	Asp	Asp	Ser	Asp	Gln	Asp	Ser	Cys	Arg	Leu
	195					200					205				
Ser	Ile	Asp	Ser	Gln	Ser	Ser	Ser	Ser	Gly	Pro	Arg	Lys	His	Leu	Arg
	210					215					220				
Thr	Asp	Ala	Phe	Ser	Gln	His	His	Leu	Glu	Pro	Leu	Glu	Cys	Pro	Phe
225					230					235				240	
Glu	Arg	Gln	His	Tyr	Pro	Glu	Ala	Tyr	Ala	Ser	Pro	Ser	His	Thr	Lys
			245						250					255	
Gly	Glu	Gln	Gly	Leu	Tyr	Pro	Leu	Pro	Leu	Leu	Asn	Ser	Thr	Leu	Asp
		260						265					270		
Asp	Gly	Lys	Ala	Thr	Leu	Thr	Pro	Ser	Asn	Thr	Pro	Leu	Gly	Arg	Asn
		275					280					285			
Leu	Ser	Thr	His	Gln	Thr	Tyr	Pro	Val	Val	Ala	Asp	Pro	His	Ser	Pro
	290					295					300				
Phe	Ala	Ile	Lys	Gln	Glu	Thr	Pro	Glu	Val	Ser	Ser	Ser	Ser	Ser	Thr
305					310					315				320	
Pro	Ser	Ser	Leu	Ser	Ser	Ser	Ala	Phe	Leu	Asp	Leu	Gln	Gln	Val	Gly
			325						330					335	
Ser	Gly	Val	Pro	Phe	Asn	Ala	Phe	Pro	His	Ala	Ala	Ser	Val	Tyr	
		340					345					350			
Gly	Gln	Phe	Thr	Gly	Gln	Ala	Leu	Leu	Ser	Gly	Arg	Glu	Met	Val	Gly
		355				360						365			
Pro	Thr	Leu	Pro	Gly	Tyr	Pro	Pro	His	Ile	Pro	Thr	Ser	Gly	Gln	Gly
	370					375					380				
Ser	Tyr	Ala	Ser	Ser	Ala	Ile	Ala	Gly	Met	Val	Ala	Gly	Ser	Glu	Tyr
385					390					395				400	
Ser	Gly	Asn	Ala	Tyr	Gly	His	Thr	Pro	Tyr	Ser	Ser	Tyr	Ser	Glu	Ala

254

	405		410		415
Trp Arg Phe	Pro Asn Ser Ser Leu	Leu Ser Ser	Pro Tyr Tyr Tyr Ser		
	420	425	430		
Ser Thr Ser	Arg Pro Ser Ala	Pro Pro Thr Thr	Ala Thr Ala Phe Asp		
	435	440	445		
His Leu					
450					

<210> 244
 <211> 2381
 <212> DNA
 <213> Homo sapiens

<220>
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 <222> (1)...(2381)
 <223> n = A,T,C or G

<400> 244
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 ggccaccag ggtgtaaggc cctgcgacat ctctcgccag ctccgctga gccatgggtg 180
 cgtcagcaag atccttggca ggtactacga gactggcagc atccggcctg gagtgatagg 240
 gggctccaag cccaaggtgg ccacccccaa ggtggtggag aagattgggg actacaaacg 300
 ccagaacct accatgtttg cctgggagat ccgagaccgg ctctggctg agggcgtctg 360
 tgacaatgac actgtgccc gtgtcagctc cattaataga atcatccgga ccaaagtga 420
 gcaaccattc aacctcccta tggacagctg cgtggccacc aagtccctga gtcccgga 480
 cacgctgac cccagctcag ctgtaactcc cccggagtca cccagtcgg attccctggg 540
 ctccacctac tccatcaatg ggctcctgg catcgctcag cctggcagcg acaagaggaa 600
 aatggatgac agtgatcagg atagctgcg actaagcatt gactcacaga gcagcagcag 660
 cggaccccca aagcaccttc gcacggatgc cttcagccag caccacctcg agccgctcga 720
 gtgcccattt gagcggcagc actaccaga ggccatagcc tccccagcc acaccaaagg 780
 cgagcagggc ctctaccgc tgcccttgct caacagcacc ctggacgacg ggaaggccac 840
 cctgacccct tccaacacgc cactggggcg caacctctcg actcaccaga cctaccccg 900
 ggtggcagg cgagagatgg tggggccac gctgcccga taccacccc acatcccac 960
 cagcggacag ggcagctatg cctcctctgc catcgaggc atggtggcag gaagtgaata 1020
 ctctggcaat gcctatggcc acacccccta ctctcctac agcgaggcct ggggcttccc 1080
 caactccagc ttgtgagtt ccccatatta ttacagttcc acatcaaggc cgagtgcacc 1140
 gccaccact gccacggcct ttgaccatct gtagttgcca tggggacagt gggagcga 1200
 gagcaacagg aggactcagc ctgggacagg cccagagag tcacacaaag gaatctttat 1260
 tattacatga aaaataacca caagtccagc attgoggcac actccctgtg tggttaattt 1320
 aatgaacct gaaagacagg atgacctgg acaaggccaa actgtcctoc aagactcctt 1380
 aatgaggggc aggagtccca gggaaagaga accatgccat gctgaaaaag acaaaattga 1440
 agaagaaatg tagccccagc cggtaacctc caaaggagag aagaagcaat agccgaggaa 1500
 cttgggggga tggcgaatgg ttcttgccc ggcccaaggg tgcacagggc acctccatgg 1560
 ctccattatt aacacaactc tagcaattat ggaccataag cacttcctc cagcccacaa 1620
 gtcacagcct ggtgccgagg ctctgctcac cagccacca gggagtcacc tccctcagcc 1680
 tccgcctgc cccacacgga ggctctggct gtccctcttc ctccactcca tttgcttggc 1740
 tctttctaca cctccctctt ggatgggctg agggctggag cgagtccctc agaaattcca 1800
 ccaggctgtc agctgaacct tttttcctgc tgctgtgaag gtatagcacc ancccaggtc 1860
 ctctgcagc gcggcatccc cttggcagct gccgtcagcc agggcagccc caggagctt 1920
 aaaacagaca ttccacaggc cctgggcccc tgggaggtga ggtgtggtgt gcggcttcac 1980
 ccagggcaga acaaggcaga atcgcaggaa acccgnttc cccttcctga cagctcctgc 2040
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 cccnntgaa gccagcgata gangggctcc tctctgntc cccagcagct cctgccccca 2160
 naggcctgac tgtatatact gtaaatgaaa ctttgtttgg gtcaagcttc cttctttcta 2220
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<210> 245
<211> 387
<212> PRT
<213> Homo sapiens
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<400>	245														
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		20						25					30		
Arg	Ile	Val	Asp	Leu	Ala	His	Gln	Gly	Val	Arg	Pro	Cys	Asp	Ile	Ser
		35					40					45			
Arg	Gln	Leu	Arg	Val	Ser	His	Gly	Cys	Val	Ser	Lys	Ile	Leu	Gly	Arg
	50					55					60				
Tyr	Tyr	Glu	Thr	Gly	Ser	Ile	Arg	Pro	Gly	Val	Ile	Gly	Gly	Ser	Lys
65					70					75					80
Pro	Lys	Val	Ala	Thr	Pro	Lys	Val	Val	Glu	Lys	Ile	Gly	Asp	Tyr	Lys
				85					90					95	
Arg	Gln	Asn	Pro	Thr	Met	Phe	Ala	Trp	Glu	Ile	Arg	Asp	Arg	Leu	Leu
				100				105					110		
Ala	Glu	Gly	Val	Cys	Asp	Asn	Asp	Thr	Val	Pro	Ser	Val	Ser	Ser	Ile
		115					120					125			
Asn	Arg	Ile	Ile	Arg	Thr	Lys	Val	Gln	Gln	Pro	Phe	Asn	Leu	Pro	Met
	130					135					140				
Asp	Ser	Cys	Val	Ala	Thr	Lys	Ser	Leu	Ser	Pro	Gly	His	Thr	Leu	Ile
145					150					155					160
Pro	Ser	Ser	Ala	Val	Thr	Pro	Pro	Glu	Ser	Pro	Gln	Ser	Asp	Ser	Leu
				165					170					175	
Gly	Ser	Thr	Tyr	Ser	Ile	Asn	Gly	Leu	Leu	Gly	Ile	Ala	Gln	Pro	Gly
			180					185					190		
Ser	Asp	Lys	Arg	Lys	Met	Asp	Asp	Ser	Asp	Gln	Asp	Ser	Cys	Arg	Leu
		195					200					205			
Ser	Ile	Asp	Ser	Gln	Ser	Ser	Ser	Ser	Gly	Pro	Arg	Lys	His	Leu	Arg
	210					215					220				
Thr	Asp	Ala	Phe	Ser	Gln	His	His	Leu	Glu	Pro	Leu	Glu	Cys	Pro	Phe
225					230					235					240
Glu	Arg	Gln	His	Tyr	Pro	Glu	Ala	Tyr	Ala	Ser	Pro	Ser	His	Thr	Lys
				245					250					255	
Gly	Glu	Gln	Gly	Leu	Tyr	Pro	Leu	Pro	Leu	Leu	Asn	Ser	Thr	Leu	Asp
			260					265					270		
Asp	Gly	Lys	Ala	Thr	Leu	Thr	Pro	Ser	Asn	Thr	Pro	Leu	Gly	Arg	Asn
		275					280					285			
Leu	Ser	Thr	His	Gln	Thr	Tyr	Pro	Val	Val	Ala	Gly	Arg	Glu	Met	Val
	290					295					300				
Gly	Pro	Thr	Leu	Pro	Gly	Tyr	Pro	Pro	His	Ile	Pro	Thr	Ser	Gly	Gln
305					310					315					320
Gly	Ser	Tyr	Ala	Ser	Ser	Ala	Ile	Ala	Gly	Met	Val	Ala	Gly	Ser	Glu
				325					330					335	
Tyr	Ser	Gly	Asn	Ala	Tyr	Gly	His	Thr	Pro	Tyr	Ser	Ser	Tyr	Ser	Glu
			340					345					350		
Ala	Trp	Arg	Phe	Pro											

385

<210> 246

<211> 387

<212> PRT

<213> Homo sapiens

<400> 246

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 20          25          30
Arg Ile Val Asp Leu Ala His Gln Gly Val Arg Pro Cys Asp Ile Ser
 35          40          45
Arg Gln Leu Arg Val Ser His Gly Cys Val Ser Lys Ile Leu Gly Arg
 50          55          60
Tyr Tyr Glu Thr Gly Ser Ile Arg Pro Gly Val Ile Gly Gly Ser Lys
 65          70          75          80
Pro Lys Val Ala Thr Pro Lys Val Val Glu Lys Ile Gly Asp Tyr Lys
 85          90          95
Arg Gln Asn Pro Thr Met Phe Ala Trp Glu Ile Arg Asp Arg Leu Leu
 100          105          110
Ala Glu Gly Val Cys Asp Asn Asp Thr Val Pro Ser Val Ser Ser Ile
 115          120          125
Asn Arg Ile Ile Arg Thr Lys Val Gln Gln Pro Phe Asn Leu Pro Met
 130          135          140
Asp Ser Cys Val Ala Thr Lys Ser Leu Ser Pro Gly His Thr Leu Ile
 145          150          155          160
Pro Ser Ser Ala Val Thr Pro Pro Glu Ser Pro Gln Ser Asp Ser Leu
 165          170          175
Gly Ser Thr Tyr Ser Ile Asn Gly Leu Leu Gly Ile Ala Gln Pro Gly
 180          185          190
Ser Asp Lys Arg Lys Met Asp Asp Ser Asp Gln Asp Ser Cys Arg Leu
 195          200          205
Ser Ile Asp Ser Gln Ser Ser Ser Ser Gly Pro Arg Lys His Leu Arg
 210          215          220
Thr Asp Ala Phe Ser Gln His His Leu Glu Pro Leu Glu Cys Pro Phe
 225          230          235          240
Glu Arg Gln His Tyr Pro Glu Ala Tyr Ala Ser Pro Ser His Thr Lys
 245          250          255
Gly Glu Gln Gly Leu Tyr Pro Leu Pro Leu Leu Asn Ser Thr Leu Asp
 260          265          270
Asp Gly Lys Ala Thr Leu Thr Pro Ser Asn Thr Pro Leu Gly Arg Asn
 275          280          285
Leu Ser Thr His Gln Thr Tyr Pro Val Val Ala Gly Arg Glu Met Val
 290          295          300
Gly Pro Thr Leu Pro Gly Tyr Pro Pro His Ile Pro Thr Ser Gly Gln
 305          310          315          320
Gly Ser Tyr Ala Ser Ser Ala Ile Ala Gly Met Val Ala Gly Ser Glu
 325          330          335
Tyr Ser Gly Asn Ala Tyr Gly His Thr Pro Tyr Ser Ser Tyr Ser Glu
 340          345          350
Ala Trp Gly Phe Pro Asn Ser Ser Leu Leu Ser Ser Pro Tyr Tyr Tyr
 355          360          365
Ser Ser Thr Ser Arg Pro Ser Ala Pro Pro Thr Thr Ala Thr Ala Phe
 370          375          380
Asp His Leu

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385

<210> 247
 <211> 2641
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> misc_feature
 <222> (1)...(2641)
 <223> n = A,T,C or G

<400> 247
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 tgaggggcctg cagccggccg gccagggcag cggcaggcgc ggcccgacc tacgggagga 120
 agcccccagc cctcggcggg ctgcgagcga ctcccggcg atgcctcaca actccatcag 180
 atctggccat ggagggtga accagctggg aggggccttt gtgaatggca gacctctgcc 240
 ggaagtggtc cgccagcgca tcgtagacct ggcccaccag ggtgtaaggc cctgcgacat 300
 ctctcgccag ctccgcgtca gccatggctg cgtcagcaag atccttggca ggtactacga 360
 gactggcagc atccggcctg gactgatagg gggctccaag cccaagggtg cccccccaa 420
 ggtggtggag aagattgggg actacaaacg ccagaaccct accatgtttg cctgggagat 480
 ccgagaccgg ctcttggtg agggcgtctg tgacaatgac actgtgccc a gtgtcagctc 540
 cattaataga atcatccgga ccaaagtga gcaaccattc aacctcccta tggacagctg 600
 cgtggccacc aagtccctga gtcccgaca caogctgac ccagctcag ctgtaactcc 660
 ccggagtc a cccagtcgg attccctgg ctccacctac tccatcaatg ggctcctggg 720
 catcgctcag cctggcagcg acaagaggaa aatggatgac agtgatcagg atagctgccc 780
 actaagcatt gactcacaga gcagcagcag cggacccga aagcacctc gcacggatgc 840
 cttcagccag caccacctg agccgctcga gtgcccattt gagcggcagc actaccaga 900
 ggccatagcc tccccagcc acaccaaagg cgagcagggc ctctaccgc tgccttgcct 960
 caacagcacc ctggacgacg ggaaggccac cctgacccct tccaacacgc cactggggcg 1020
 caacctctcg actcaccaga cctaccccggt ggtggcagct ccgccctttt ggatctgcag 1080
 caagtggctg ccggggctcc gcccttcaat gccccttccc atgctgcctc cgtgtacggg 1140
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 agcagggcct ggggcttccc caactccagc ttgctgagtt ccccatatta ttacagttcc 1380
 acatcaaggc cgagtgcacc gccaccact gccacggcct ttgaccatct gtagttgcca 1440
 tggggacagt gggagcgact gagcaacagg aggactcagc ctgggacagg cccagagag 1500
 tcacacaaag gaatctttat tattacatga aaaataacca caagtccagc attgcggcac 1560
 actccctgtg tggtaattt aatgaaccat gaaagacagg atgaccttg acaaggccaa 1620
 actgtcctcc aagactcctt aatgaggggc aggagtccca gggaaagaga accatgccat 1680
 gctgaaaaag acaaaattga agaagaaatg tagccccagc cggtaccctc caaaggagag 1740
 aagaagcaat agccgaggaa cttgggggga tggogaatgg ttctgcccg ggcccaaggg 1800
 tgcacagggc acctccatgg ctccattatt aacacaactc tagcaattat ggaccataag 1860
 cacttccctc cagcccacaa gtcacagcct ggtgccgagg ctctgctcac cagccacca 1920
 gggagtcacc tccctcagcc tcccgctgc cccacacgga ggctctggct gtcctctttc 1980
 ctccactcca tttgcttggc tctttctaca cctccctctt ggatgggctg agggctggag 2040
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 ggtgtgggtg gcggttccac ccagggcaga acaaggcaga atcgagga acccgnttc 2280
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 gtcaagcttc cttctttcta accccnaga ctttggcctc tgagtgaat gtctctcttt 2520
 gccctgtggg gcttctctcc ttgatgcttc tttctttttt taaagacaac ctgccattac 2580
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a

2641

<210> 248

<211> 398

<212> PRT

<213> Homo sapiens

<400> 248

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          20           25           30
Arg Ile Val Asp Leu Ala His Gln Gly Val Arg Pro Cys Asp Ile Ser
          35           40           45
Arg Gln Leu Arg Val Ser His Gly Cys Val Ser Lys Ile Leu Gly Arg
          50           55           60
Tyr Tyr Glu Thr Gly Ser Ile Arg Pro Gly Val Ile Gly Gly Ser Lys
65          70          75          80
Pro Lys Val Ala Thr Pro Lys Val Val Glu Lys Ile Gly Asp Tyr Lys
          85          90          95
Arg Gln Asn Pro Thr Met Phe Ala Trp Glu Ile Arg Asp Arg Leu Leu
          100         105         110
Ala Glu Gly Val Cys Asp Asn Asp Thr Val Pro Ser Val Ser Ser Ile
          115         120         125
Asn Arg Ile Ile Arg Thr Lys Val Gln Gln Pro Phe Asn Leu Pro Met
          130         135         140
Asp Ser Cys Val Ala Thr Lys Ser Leu Ser Pro Gly His Thr Leu Ile
145          150         155         160
Pro Ser Ser Ala Val Thr Pro Pro Glu Ser Pro Gln Ser Asp Ser Leu
          165         170         175
Gly Ser Thr Tyr Ser Ile Asn Gly Leu Leu Gly Ile Ala Gln Pro Gly
          180         185         190
Ser Asp Lys Arg Lys Met Asp Asp Ser Asp Gln Asp Ser Cys Arg Leu
          195         200         205
Ser Ile Asp Ser Gln Ser Ser Ser Ser Gly Pro Arg Lys His Leu Arg
          210         215         220
Thr Asp Ala Phe Ser Gln His His Leu Glu Pro Leu Glu Cys Pro Phe
225          230         235         240
Glu Arg Gln His Tyr Pro Glu Ala Tyr Ala Ser Pro Ser His Thr Lys
          245         250         255
Gly Glu Gln Gly Leu Tyr Pro Leu Pro Leu Leu Asn Ser Thr Leu Asp
          260         265         270
Asp Gly Lys Ala Thr Leu Thr Pro Ser Asn Thr Pro Leu Gly Arg Asn
          275         280         285
Leu Ser Thr His Gln Thr Tyr Pro Val Val Ala Ala Pro Pro Phe Trp
          290         295         300
Ile Cys Ser Lys Ser Ala Pro Gly Ser Arg Pro Ser Met Pro Phe Pro
305          310         315         320
Met Leu Pro Pro Cys Thr Gly Ser Ser Arg Ala Arg Pro Ser Ser Gln
          325         330         335
Gly Glu Arg Trp Trp Gly Pro Arg Cys Pro Asp Thr His Pro Thr Ser
          340         345         350
Pro Pro Ala Asp Arg Ala Ala Met Pro Pro Leu Pro Ser Gln Ala Trp
          355         360         365
Trp Gln Glu Val Asn Thr Leu Ala Met Pro Met Ala Thr Pro Pro Thr
          370         375         380
Pro Pro Thr Ala Arg Pro Gly Ala Ser Pro Thr Pro Ala Cys
385          390         395

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<210> 249
 <211> 2410
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(2410)
 <223> n = A,T,C or G

<400> 249
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 agccccgagc cctcggcggg ctgcgagcga ctccccggcg atgcctcaca aotccatcag 180
 atctggccat ggagggctga accagctggg aggggccttt gtgaatggca gacctctgcc 240
 ggaagtggc cgccagcgca tcgtagacct ggcccaccag ggtgtaaggc cctgcgacat 300
 ctctcgccag ctccgcgtca gccatggctg cgtcagcaag atccttggca ggtactacga 360
 gactggcagc atccggcctg gagtgatagg gggtcccaag cccaaggtgg ccacccccaa 420
 ggtggtggag aagattgggg actacaaacg ccagaaccct accatgtttg cctgggagat 480
 ccgagaccgg ctcttgctg agggcgtctg tgacaatgac actgtgcca gtgtcagctc 540
 cattaataga atcatcggga ccaaagtga gcaaccattc aacctcccta tggacagctg 600
 cgtggccacc aagtccctga gtcccggaca cacgctgate ccagctcag ctgtaactcc 660
 cccggagtca cccagtcgg attccctggg ctccacctac tccatcaatg ggctcctggg 720
 catcgctcag cctggcagcg acaagaggaa aatggatgac agtgatcagg atagctgccg 780
 actaagcatt gactcacaga gcaycagcag cggaccccg aagcaccttc gcacggatgc 840
 cttcagccag caccacctcg agccgctcga gtgccattt gagcggcagc actaccaga 900
 ggctatgcc tccccagcc acaccaaagg cgagcagggc gagagatggg ggggcccacg 960
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<210> 250
 <211> 321
 <212> PRT

260

<213> Homo sapiens

<400> 250

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Gly Gly Ala Phe Val Asn Gly Arg Pro Leu Pro Glu Val Val Arg Gln
 20          25          30
Arg Ile Val Asp Leu Ala His Gln Gly Val Arg Pro Cys Asp Ile Ser
 35          40          45
Arg Gln Leu Arg Val Ser His Gly Cys Val Ser Lys Ile Leu Gly Arg
 50          55          60
Tyr Tyr Glu Thr Gly Ser Ile Arg Pro Gly Val Ile Gly Gly Ser Lys
 65          70          75          80
Pro Lys Val Ala Thr Pro Lys Val Val Glu Lys Ile Gly Asp Tyr Lys
 85          90          95
Arg Gln Asn Pro Thr Met Phe Ala Trp Glu Ile Arg Asp Arg Leu Leu
 100         105         110
Ala Glu Gly Val Cys Asp Asn Asp Thr Val Pro Ser Val Ser Ser Ile
 115         120         125
Asn Arg Ile Ile Arg Thr Lys Val Gln Gln Pro Phe Asn Leu Pro Met
 130         135         140
Asp Ser Cys Val Ala Thr Lys Ser Leu Ser Pro Gly His Thr Leu Ile
 145         150         155         160
Pro Ser Ser Ala Val Thr Pro Pro Glu Ser Pro Gln Ser Asp Ser Leu
 165         170         175
Gly Ser Thr Tyr Ser Ile Asn Gly Leu Leu Gly Ile Ala Gln Pro Gly
 180         185         190
Ser Asp Lys Arg Lys Met Asp Asp Ser Asp Gln Asp Ser Cys Arg Leu
 195         200         205
Ser Ile Asp Ser Gln Ser Ser Ser Ser Gly Pro Arg Lys His Leu Arg
 210         215         220
Thr Asp Ala Phe Ser Gln His His Leu Glu Pro Leu Glu Cys Pro Phe
 225         230         235         240
Glu Arg Gln His Tyr Pro Glu Ala Tyr Ala Ser Pro Ser His Thr Lys
 245         250         255
Gly Glu Gln Gly Glu Arg Trp Trp Gly Pro Arg Cys Pro Asp Thr His
 260         265         270
Pro Thr Ser Pro Pro Ala Asp Arg Ala Ala Met Pro Pro Leu Pro Ser
 275         280         285
Gln Ala Trp Trp Gln Glu Val Asn Thr Leu Ala Met Pro Met Ala Thr
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Pro Pro Thr Pro Pro Thr Ala Arg Pro Gly Ala Ser Pro Thr Pro Ala
 305         310         315         320
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<210> 251

<211> 2308

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(2308)

<223> n = A,T,C or G

<400> 251

261

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ccgagaccgg ctctggctg agggcgtctg tgacaatgac actgtgcca gtgtcagctc 540
cattaataga atcatccgga ccaaagtga gcaaccattc aacctcccta tggacagctg 600
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cccgagtgca cccagtgctg attccctggg ctccacctac tccatcaatg ggctcctggg 720
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<210> 252

<211> 287

<212> PRT

<213> Homo sapiens

<400> 252

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Met Pro His Asn Ser Ile Arg Ser Gly His Gly Gly Leu Asn Gln Leu
1           5           10          15
Gly Gly Ala Phe Val Asn Gly Arg Pro Leu Pro Glu Val Val Arg Gln
20          25          30
Arg Ile Val Asp Leu Ala His Gln Gly Val Arg Pro Cys Asp Ile Ser
35          40          45
Arg Gln Leu Arg Val Ser His Gly Cys Val Ser Lys Ile Leu Gly Arg
50          55          60
Tyr Tyr Glu Thr Gly Ser Ile Arg Pro Gly Val Ile Gly Gly Ser Lys
65          70          75          80
Pro Lys Val Ala Thr Pro Lys Val Val Glu Lys Ile Gly Asp Tyr Lys
85          90          95

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262

Arg Gln Asn Pro Thr Met Phe Ala Trp Glu Ile Arg Asp Arg Leu Leu
 100 105 110
 Ala Glu Gly Val Cys Asp Asn Asp Thr Val Pro Ser Val Ser Ser Ile
 115 120 125
 Asn Arg Ile Ile Arg Thr Lys Val Gln Gln Pro Phe Asn Leu Pro Met
 130 135 140
 Asp Ser Cys Val Ala Thr Lys Ser Leu Ser Pro Gly His Thr Leu Ile
 145 150 155 160
 Pro Ser Ser Ala Val Thr Pro Pro Glu Ser Pro Gln Ser Asp Ser Leu
 165 170 175
 Gly Ser Thr Tyr Ser Ile Asn Gly Leu Leu Gly Ile Ala Gln Pro Gly
 180 185 190
 Ser Asp Lys Arg Lys Met Asp Asp Ser Asp Gln Asp Ser Cys Arg Leu
 195 200 205
 Ser Ile Asp Ser Gln Ser Ser Ser Ser Gly Pro Arg Lys His Leu Arg
 210 215 220
 Thr Asp Ala Phe Ser Gln His His Leu Glu Pro Leu Glu Cys Pro Phe
 225 230 235 240
 Glu Arg Gln His Tyr Pro Glu Ala Tyr Ala Ser Pro Ser His Thr Lys
 245 250 255
 Gly Glu Gln Glu Val Asn Thr Leu Ala Met Pro Met Ala Thr Pro Pro
 260 265 270
 Thr Pro Pro Thr Ala Arg Pro Gly Ala Ser Pro Thr Pro Ala Cys
 275 280 285

<210> 253

<211> .2148

<212> DNA

<213> Homo sapiens

<400> 253

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 actctctgag gaaaaacccat tttgattatt actctcagac gtgcgtggca acaagtga 180
 gagacctaga aatccaagcg ttggagggtcc tgaggccagc ctaagtcgct tcaaaatgga 240
 acgaaggcgt ttgtgggggt ccattcagag ccgatacatc agcatgagtg tgtggacaag 300
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 cgggagacac agccagaccc tgaaggcaat ggtgcaggcc tggcccttca cctgcctccc 480
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 cttgcagagt ctctgcagc acctcatcgg gctgagcaat ctgaccacag tgetgtatcc 1560

263

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tagtgccaac cctgtcctc actgtgggga cagaaccttc tatgaccgg agcccatcct 1740
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gttcagtgag gaaaaaaaagg ggaagttggg gataggcaga tgttgacttg aggagttaat 1980
gtgatctttg gggagataca tcttatagag ttagaaatag aatctgaatt tctaaaggga 2040
gattctggct tgggaagtac atgtaggagt taatccctgt gtagactgtt gtaaagaaac 2100
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<210> 254

<211> 509

<212> PRT

<213> Homo sapiens

<400> 254

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Met Glu Arg Arg Arg Leu Trp Gly Ser Ile Gln Ser Arg Tyr Ile Ser
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Met Ser Val Trp Thr Ser Pro Arg Arg Leu Val Glu Leu Ala Gly Gln
20          25          30
Ser Leu Leu Lys Asp Glu Ala Leu Ala Ile Ala Ala Leu Glu Leu Leu
35          40          45
Pro Arg Glu Leu Phe Pro Pro Leu Phe Met Ala Ala Phe Asp Gly Arg
50          55          60
His Ser Gln Thr Leu Lys Ala Met Val Gln Ala Trp Pro Phe Thr Cys
65          70          75          80
Leu Pro Leu Gly Val Leu Met Lys Gly Gln His Leu His Leu Glu Thr
85          90          95
Phe Lys Ala Val Leu Asp Gly Leu Asp Val Leu Leu Ala Gln Glu Val
100         105         110
Arg Pro Arg Arg Trp Lys Leu Gln Val Leu Asp Leu Arg Lys Asn Ser
115         120         125
His Gln Asp Phe Trp Thr Val Trp Ser Gly Asn Arg Ala Ser Leu Tyr
130         135         140
Ser Phe Pro Glu Pro Glu Ala Ala Gln Pro Met Thr Lys Lys Arg Lys
145         150         155         160
Val Asp Gly Leu Ser Thr Glu Ala Glu Gln Pro Phe Ile Pro Val Glu
165         170         175
Val Leu Val Asp Leu Phe Leu Lys Glu Gly Ala Cys Asp Glu Leu Phe
180         185         190
Ser Tyr Leu Ile Glu Lys Val Lys Arg Lys Lys Asn Val Leu Arg Leu
195         200         205
Cys Cys Lys Lys Leu Lys Ile Phe Ala Met Pro Met Gln Asp Ile Lys
210         215         220
Met Ile Leu Lys Met Val Gln Leu Asp Ser Ile Glu Asp Leu Glu Val
225         230         235         240
Thr Cys Thr Trp Lys Leu Pro Thr Leu Ala Lys Phe Ser Pro Tyr Leu
245         250         255
Gly Gln Met Ile Asn Leu Arg Arg Leu Leu Leu Ser His Ile His Ala
260         265         270
Ser Ser Tyr Ile Ser Pro Glu Lys Glu Glu Gln Tyr Ile Ala Gln Phe
275         280         285
Thr Ser Gln Phe Leu Ser Leu Gln Cys Leu Gln Ala Leu Tyr Val Asp
290         295         300
Ser Leu Phe Phe Leu Arg Gly Arg Leu Asp Gln Leu Leu Arg His Val
305         310         315         320
Met Asn Pro Leu Glu Thr Leu Ser Ile Thr Asn Cys Arg Leu Ser Glu

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264

				325						330					335
Gly	Asp	Val	Met	His	Leu	Ser	Gln	Ser	Pro	Ser	Val	Ser	Gln	Leu	Ser
			340						345				350		
Val	Leu	Ser	Leu	Ser	Gly	Val	Met	Leu	Thr	Asp	Val	Ser	Pro	Glu	Pro
		355					360					365			
Leu	Gln	Ala	Leu	Leu	Glu	Arg	Ala	Ser	Ala	Thr	Leu	Gln	Asp	Leu	Val
	370					375					380				
Phe	Asp	Glu	Cys	Gly	Ile	Thr	Asp	Asp	Gln	Leu	Leu	Ala	Leu	Leu	Pro
385					390					395					400
Ser	Leu	Ser	His	Cys	Ser	Gln	Leu	Thr	Thr	Leu	Ser	Phe	Tyr	Gly	Asn
			405						410					415	
Ser	Ile	Ser	Ile	Ser	Ala	Leu	Gln	Ser	Leu	Leu	Gln	His	Leu	Ile	Gly
		420						425					430		
Leu	Ser	Asn	Leu	Thr	His	Val	Leu	Tyr	Pro	Val	Pro	Leu	Glu	Ser	Tyr
	435						440					445			
Glu	Asp	Ile	His	Gly	Thr	Leu	His	Leu	Glu	Arg	Leu	Ala	Tyr	Leu	His
	450					455					460				
Ala	Arg	Leu	Arg	Glu	Leu	Cys	Glu	Leu	Gly	Arg	Pro	Ser	Met	Val	
465					470				475					480	
Trp	Leu	Ser	Ala	Asn	Pro	Cys	Pro	His	Cys	Gly	Asp	Arg	Thr	Phe	Tyr
			485						490					495	
Asp	Pro	Glu	Pro	Ile	Leu	Cys	Pro	Cys	Phe	Met	Pro	Asn			
			500					505							

<210> 255

<211> 2261

<212> DNA

<213> Homo sapiens

<400> 255

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265

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aaccatgtat tctactcatg ttgccattta atgcatggat aaacttgctg caagcctgga 2040
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atgagtaatg aagttacctt ttttgtttaa aaaaaaaaaa g 2261

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<210> 256

<211> 587

<212> PRT

<213> Homo sapiens

<400> 256

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Met Ser His Thr Val Ala Gly Gly Gly Ser Gly Asp His Ser His Gln
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Val Arg Val Lys Ala Tyr Tyr Arg Gly Asp Ile Met Ile Thr His Phe
20          25          30
Glu Pro Ser Ile Ser Phe Glu Gly Leu Cys Asn Glu Val Arg Asp Met
35          40          45
Cys Ser Phe Asp Asn Glu Gln Leu Phe Thr Met Lys Trp Ile Asp Glu
50          55          60
Glu Gly Asp Pro Cys Thr Val Ser Ser Gln Leu Glu Leu Glu Ala
65          70          75          80
Phe Arg Leu Tyr Glu Leu Asn Lys Asp Ser Glu Leu Leu Ile His Val
85          90          95
Phe Pro Cys Val Pro Glu Arg Pro Gly Met Pro Cys Pro Gly Glu Asp
100          105          110
Lys Ser Ile Tyr Arg Arg Gly Ala Arg Arg Trp Arg Lys Leu Tyr Cys
115          120          125
Ala Asn Gly His Thr Phe Gln Ala Lys Arg Phe Asn Arg Arg Ala His
130          135          140
Cys Ala Ile Cys Thr Asp Arg Ile Trp Gly Leu Gly Arg Gln Gly Tyr
145          150          155          160
Lys Cys Ile Asn Cys Lys Leu Leu Val His Lys Lys Cys His Lys Leu
165          170          175
Val Thr Ile Glu Cys Gly Arg His Ser Leu Pro Gln Glu Pro Val Met
180          185          190
Pro Met Asp Gln Ser Ser Met His Ser Asp His Ala Gln Thr Val Ile
195          200          205
Pro Tyr Asn Pro Ser Ser His Glu Ser Leu Asp Gln Val Gly Glu Glu
210          215          220
Lys Glu Ala Met Asn Thr Arg Glu Ser Gly Lys Ala Ser Ser Ser Leu
225          230          235          240
Gly Leu Gln Asp Phe Asp Leu Leu Arg Val Ile Gly Arg Gly Ser Tyr
245          250          255
Ala Lys Val Leu Leu Val Arg Leu Lys Lys Thr Asp Arg Ile Tyr Ala
260          265          270
Met Lys Val Val Lys Lys Glu Leu Val Asn Asp Asp Glu Asp Ile Asp
275          280          285
Trp Val Gln Thr Glu Lys His Val Phe Glu Gln Ala Ser Asn His Pro
290          295          300
Phe Leu Val Gly Leu His Ser Cys Phe Gln Thr Glu Ser Arg Leu Phe
305          310          315          320

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<210> 257
<211> 6742
<212> DNA
<213> Homo sapiens
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<210> 264

<211> 599

<212> PRT

<213> Homo sapiens

<400> 264

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Pro Pro Leu Pro Val Leu Leu Ala Asp Pro Gly Ala Pro Thr Pro Val
20          25          30
Asn Pro Cys Cys Tyr Tyr Pro Cys Gln His Gln Gly Ile Cys Val Arg
35          40          45
Phe Gly Leu Asp Arg Tyr Gln Cys Asp Cys Thr Arg Thr Gly Tyr Ser
50          55          60

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Gly	Pro	Asn	Cys	Thr	Ile	Pro	Gly	Leu	Trp	Thr	Trp	Leu	Arg	Asn	Ser	65	70	75	80
Leu	Arg	Pro	Ser	Pro	Ser	Phe	Thr	His	Phe	Leu	Leu	Thr	His	Gly	Arg	85	90	95	
Trp	Phe	Trp	Glu	Phe	Val	Asn	Ala	Thr	Phe	Ile	Arg	Glu	Met	Leu	Met	100	105	110	
Arg	Leu	Val	Leu	Thr	Val	Arg	Ser	Asn	Leu	Ile	Pro	Ser	Pro	Pro	Thr	115	120	125	
Tyr	Asn	Ser	Ala	His	Asp	Tyr	Ile	Ser	Trp	Glu	Ser	Phe	Ser	Asn	Val	130	135	140	
Ser	Tyr	Tyr	Thr	Arg	Ile	Leu	Pro	Ser	Val	Pro	Lys	Asp	Cys	Pro	Thr	145	150	155	160
Pro	Met	Gly	Thr	Lys	Gly	Lys	Lys	Gln	Leu	Pro	Asp	Ala	Gln	Leu	Leu	165	170	175	
Ala	Arg	Arg	Phe	Leu	Leu	Arg	Arg	Lys	Phe	Ile	Pro	Asp	Pro	Gln	Gly	180	185	190	
Thr	Asn	Leu	Met	Phe	Ala	Phe	Phe	Ala	Gln	His	Phe	Thr	His	Gln	Phe	195	200	205	
Phe	Lys	Thr	Ser	Gly	Lys	Met	Gly	Pro	Gly	Phe	Thr	Lys	Ala	Leu	Gly	210	215	220	
His	Gly	Val	Asp	Leu	Gly	His	Ile	Tyr	Gly	Asp	Asn	Leu	Glu	Arg	Gln	225	230	235	240
Tyr	Gln	Leu	Arg	Leu	Phe	Lys	Asp	Gly	Lys	Leu	Lys	Tyr	Gln	Val	Leu	245	250	255	
Asp	Gly	Glu	Met	Tyr	Pro	Pro	Ser	Val	Glu	Glu	Ala	Pro	Val	Leu	Met	260	265	270	
His	Tyr	Pro	Arg	Gly	Ile	Pro	Pro	Gln	Ser	Gln	Met	Ala	Val	Gly	Gln	275	280	285	
Glu	Val	Phe	Gly	Leu	Leu	Pro	Gly	Leu	Met	Leu	Tyr	Ala	Thr	Leu	Trp	290	295	300	
Leu	Arg	Glu	His	Asn	Arg	Val	Cys	Asp	Leu	Leu	Lys	Ala	Glu	His	Pro	305	310	315	320
Thr	Trp	Gly	Asp	Glu	Gln	Leu	Phe	Gln	Thr	Thr	Arg	Leu	Ile	Leu	Ile	325	330	335	
Gly	Glu	Thr	Ile	Lys	Ile	Val	Ile	Glu	Glu	Tyr	Val	Gln	Gln	Leu	Ser	340	345	350	
Gly	Tyr	Phe	Leu	Gln	Leu	Lys	Phe	Asp	Pro	Glu	Leu	Leu	Phe	Gly	Val	355	360	365	
Gln	Phe	Gln	Tyr	Arg	Asn	Arg	Ile	Ala	Met	Glu	Phe	Asn	His	Leu	Tyr	370	375	380	
His	Trp	His	Pro	Leu	Met	Pro	Asp	Ser	Phe	Lys	Val	Gly	Ser	Gln	Glu	385	390	395	400
Tyr	Ser	Tyr	Glu	Gln	Phe	Leu	Phe	Asn	Thr	Ser	Met	Leu	Val	Asp	Tyr	405	410	415	
Gly	Val	Glu	Ala	Leu	Val	Asp	Ala	Phe	Ser	Arg	Gln	Ile	Ala	Gly	Arg	420	425	430	
Ile	Gly	Gly	Gly	Arg	Asn	Met	Asp	His	His	Ile	Leu	His	Val	Ala	Val	435	440	445	
Asp	Val	Ile	Arg	Glu	Ser	Arg	Glu	Met	Arg	Leu	Gln	Pro	Phe	Asn	Glu	450	455	460	
Tyr	Arg	Lys	Arg	Phe	Gly	Met	Lys	Pro	Tyr	Thr	Ser	Phe	Gln	Glu	Leu	465	470	475	480
Val	Gly	Glu	Lys	Glu	Met	Ala	Ala	Glu	Leu	Glu	Glu	Leu	Tyr	Gly	Asp	485	490	495	
Ile	Asp	Ala	Leu	Glu	Phe	Tyr	Pro	Gly	Leu	Leu	Leu	Glu	Lys	Cys	His	500	505	510	
Pro	Asn	Ser	Ile	Phe	Gly	Glu	Ser	Met	Ile	Glu	Ile	Gly	Ala	Pro	Phe	515	520	525	

278

Ser Leu Lys Gly Leu Leu Gly Asn Pro Ile Cys Ser Pro Glu Tyr Trp
 530 535 540
 Lys Pro Ser Thr Phe Gly Gly Glu Val Gly Phe Asn Ile Val Lys Thr
 545 550 555 560
 Ala Thr Leu Lys Lys Leu Val Cys Leu Asn Thr Lys Thr Cys Pro Tyr
 565 570 575
 Val Ser Phe Arg Val Pro Asp Ala Ser Gln Asp Asp Gly Pro Ala Val
 580 585 590
 Glu Arg Pro Ser Thr Glu Leu
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<210> 265
 <211> 3000
 <212> DNA
 <213> Homo sapiens

<400> 265
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 agaaatggaa agtacagact tctgaaaata tctattgaaa atgagcaact tgtgattgga 180
 tcatatagtc agccttcaga ttcttgggat aaggattatg attcctttgt tttacccttg 240
 ttggaggaca aacaacctg ctatatatta ttcagggttag attctcagaa tgcccaggga 300
 tatgaatgga tattcattgc atggtctcca gatcattctc atgttcgtca aaaaatgttg 360
 tatgcagcaa caagagcaac tctgaagaag gaatttggag gtggccacat taaagatgaa 420
 gtatttggaa cagtaaagga agatgtatca ttacatggat ataaaaata cttgctgtca 480
 caatcttccc ctgcccact gactgcagct gaggaagaac tacgacagat taaaatcaat 540
 gaggtacaga ctgacgtggg tgtggacact aagcatcaaa cactacaagg agtagcattt 600
 cccatttctc gagaagcctt tcaggccttg gaaaaattga ataatagaca gctcaactat 660
 gtgcagttgg aaatagatat aaaaaatgaa attataattt tggccaacac aacaaatata 720
 gaactgaaag atttgccaaa gaggatctcc aaggattcag ctctgtacca tttctttctg 780
 tataaacatt cccatgaagg agactattta gagtccatag tttttattta ttcaatgcct 840
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<210> 266

<211> 350

<212> PRT

<213> Homo sapiens

<400> 266

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Met Ser His Gln Thr Gly Ile Gln Ala Ser Glu Asp Val Lys Glu Ile
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Phe Ala Arg Ala Arg Asn Gly Lys Tyr Arg Leu Leu Lys Ile Ser Ile
      20             25             30
Glu Asn Glu Gln Leu Val Ile Gly Ser Tyr Ser Gln Pro Ser Asp Ser
      35             40             45
Trp Asp Lys Asp Tyr Asp Ser Phe Val Leu Pro Leu Leu Glu Asp Lys
      50             55             60
Gln Pro Cys Tyr Ile Leu Phe Arg Leu Asp Ser Gln Asn Ala Gln Gly
      65             70             75             80
Tyr Glu Trp Ile Phe Ile Ala Trp Ser Pro Asp His Ser His Val Arg
      85             90             95
Gln Lys Met Leu Tyr Ala Ala Thr Arg Ala Thr Leu Lys Lys Glu Phe
      100            105            110
Gly Gly Gly His Ile Lys Asp Glu Val Phe Gly Thr Val Lys Glu Asp
      115            120            125
Val Ser Leu His Gly Tyr Lys Lys Tyr Leu Leu Ser Gln Ser Ser Pro
      130            135            140
Ala Pro Leu Thr Ala Ala Glu Glu Glu Leu Arg Gln Ile Lys Ile Asn
      145            150            155            160
Glu Val Gln Thr Asp Val Gly Val Asp Thr Lys His Gln Thr Leu Gln
      165            170            175
Gly Val Ala Phe Pro Ile Ser Arg Glu Ala Phe Gln Ala Leu Glu Lys
      180            185            190
Leu Asn Asn Arg Gln Leu Asn Tyr Val Gln Leu Glu Ile Asp Ile Lys
      195            200            205
Asn Glu Ile Ile Ile Leu Ala Asn Thr Thr Asn Thr Glu Leu Lys Asp
      210            215            220
Leu Pro Lys Arg Ile Pro Lys Asp Ser Ala Arg Tyr His Phe Phe Leu
      225            230            235            240
Tyr Lys His Ser His Glu Gly Asp Tyr Leu Glu Ser Ile Val Phe Ile
      245            250            255
Tyr Ser Met Pro Gly Tyr Thr Cys Ser Ile Arg Glu Arg Met Leu Tyr
      260            265            270
Ser Ser Cys Lys Ser Arg Leu Leu Glu Ile Val Glu Arg Gln Leu Gln
      275            280            285
Met Asp Val Ile Arg Lys Ile Glu Ile Asp Asn Gly Asp Glu Leu Thr
      290            295            300
Ala Asp Phe Leu Tyr Glu Glu Val His Pro Lys Gln His Ala His Lys
      305            310            315            320

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Gln Ser Phe Ala Lys Pro Lys Gly Pro Ala Gly Lys Arg Gly Ile Arg
325 330 335
Arg Leu Ile Arg Gly Pro Ala Glu Thr Glu Ala Thr Thr Asp
340 345 350

<400> 267
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cgcaacagcg tgaactacag gtatggccgg gtccgggca c tgtgcggtcg gacccccagt 240
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<400> 268
Met Trp Arg Val Cys Ala Arg Arg Ala Gln Asn Val Ala Pro Trp Ala
 1          5          10          15
Gly Leu Glu Ala Arg Trp Thr Ala Leu Gln Glu Val Pro Gly Thr Pro
          20          25          30
Arg Val Thr Ser Arg Ser Gly Pro Ala Pro Val Arg Arg Asn Ser Val
          35          40          45
Thr Thr Gly Tyr Gly Gly Val Arg Ala Leu Cys Gly Trp Thr Pro Ser
          50          55          60
Ser Gly Ala Thr Pro Arg Asn Arg Leu Leu Leu Gln Leu Leu Gly Ser
65          70          75          80
Pro Gly Arg Arg Tyr Tyr Ser Leu Pro Pro His Gln Lys Val Pro Leu
          85          90          95
Pro Ser Leu Ser Pro Thr Met
          100

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<400> 269						
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ctgagctgga	gacggcgatg	gagaccctca	tcaactgttt	ccacgcccc	tcggggcaag	180
aggggggaca	gtacaagctg	agcaagaagg	agctgaaaga	gctgtgcag	acggagctct	240
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cagtggcctg	taacaatttc	ttctgggaga	acagttgagc	agacagccac	attgggcagc	420
gccttctctc	tcacacctcc	cagacctgcc	tcttccccct	gcttcaacct	caccccactt	480
atccctctcc	ataaccccac	ccttgcccac	cccaccccca	ccccaccaa	gggcgcaaga	540
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aaaaaaa						607

281

<210> 270
 <211> 94
 <212> PRT
 <213> Homo sapiens

<400> 270
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 His Ala His Ser Gly Lys Glu Gly Asp Lys Tyr Lys Leu Ser Lys Lys
 20 25 30
 Glu Leu Lys Glu Leu Leu Gln Thr Glu Leu Ser Gly Phe Leu Asp Ala
 35 40 45
 Gln Lys Asp Val Asp Ala Val Asp Lys Val Met Lys Glu Leu Asp Glu
 50 55 60
 Asn Gly Asp Gly Glu Val Asp Phe Gln Glu Tyr Val Val Leu Val Ala
 65 70 75 80
 Ala Leu Thr Val Ala Cys Asn Asn Phe Phe Trp Glu Asn Ser
 85 90

<210> 271
 <211> 595
 <212> DNA
 <213> Homo sapiens

<400> 271
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 cgcacagagc tctcagcgcc gctcccagcc acagcctccc gcgcctcgc cagctccaac 120
 atggcaaaaa tctccagccc tacagagact gagcgggtgca tcgagtcctt gattgctgtc 180
 ttccagaagt atgctggaaa ggatggttat aactacactc tctccaagac agagttccta 240
 agcttcatga atacagaact agctgccttc acaaagaacc agaaggaccc tgggtgtcctt 300
 gaccgcatga tgaagaaact ggacaccaac agtgatggtc agctagattt ctcagaattt 360
 cttaattctga ttggtggcct agctatggct tgccatgact ccttcctcaa ggctgtccct 420
 tcccagaagc ggacctgagg accccttggc cctggccttc aaaccacccc cctttccttc 480
 cagcctttct gtcatcatct ccacagccca cccatccctt gagcacacta accacctcat 540
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<210> 272
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 272
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 Leu Ile Ala Val Phe Gln Lys Tyr Ala Gly Lys Asp Gly Tyr Asn Tyr
 20 25 30
 Thr Leu Ser Lys Thr Glu Phe Leu Ser Phe Met Asn Thr Glu Leu Ala
 35 40 45
 Ala Phe Thr Lys Asn Gln Lys Asp Pro Gly Val Leu Asp Arg Met Met
 50 55 60
 Lys Lys Leu Asp Thr Asn Ser Asp Gly Gln Leu Asp Phe Ser Glu Phe
 65 70 75 80
 Leu Asn Leu Ile Gly Gly Leu Ala Met Ala Cys His Asp Ser Phe Leu
 85 90 95
 Lys Ala Val Pro Ser Gln Lys Arg Thr
 100 105

<210> 273
 <211> 428
 <212> DNA
 <213> Homo sapiens

<400> 273
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 caagctgagt aagggggaaa tgaaggaact tctgcacaag gagctgcccc gctttgtggg 180
 ggagaaagtg gatgaggagg ggctgaagaa gctgatgggc agcctggatg agaacagtga 240
 ccagcaggtg gacttccagg agtatgctgt ttctctggca ctcatcactg tcatgtgcaa 300
 tgacttcttc cagggctgcc cagaccgacc ctgaagcaga actcttgact tcttgccatg 360
 gatctcttgg gcccaggact gttgatgcct ttgagttttg tattcaataa actttttttg 420
 tctgttga 428

<210> 274
 <211> 97
 <212> PRT
 <213> Homo sapiens

<400> 274
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 1 5 10 15
 His Lys Tyr Ser Cys Gln Glu Gly Asp Lys Phe Lys Leu Ser Lys Gly
 20 25 30
 Glu Met Lys Glu Leu Leu His Lys Glu Leu Pro Ser Phe Val Gly Glu
 35 40 45
 Lys Val Asp Glu Glu Gly Leu Lys Lys Leu Met Gly Ser Leu Asp Glu
 50 55 60
 Asn Ser Asp Gln Gln Val Asp Phe Gln Glu Tyr Ala Val Phe Leu Ala
 65 70 75 80
 Leu Ile Thr Val Met Cys Asn Asp Phe Phe Gln Gly Cys Pro Asp Arg
 85 90 95
 Pro

<210> 275
 <211> 470
 <212> DNA
 <213> Homo sapiens

<400> 275
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 catttgcccg cctccctacc gctccaagcc cagccctcag ccatggcatg cccctggat 120
 caggccattg gcctcctcgt ggccatcttc cacaagtact ccggcagga gggtgacaag 180
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 aagctgcagg atgctgaaat tgcaaggctg atggaagact tggaccggaa caaggaccag 300
 gaggtgaact tccaggagta tgtcaccttc ctgggggcct tggctttgat ctacaatgaa 360
 gccctcaagg gctgaaaata aatagggaag atggagacac ctctgggggt cctctctgag 420
 tcaaatccag tgggtgggtaa ttgtacaata aattttttt ggtcaaattt 470

<210> 276
 <211> 90
 <212> PRT
 <213> Homo sapiens

283

<400> 276

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Met Ala Cys Pro Leu Asp Gln Ala Ile Gly Leu Leu Val Ala Ile Phe
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His Lys Tyr Ser Gly Arg Glu Gly Asp Lys His Thr Leu Ser Lys Lys
           20           25           30
Glu Leu Lys Glu Leu Ile Gln Lys Glu Leu Thr Ile Gly Ser Lys Leu
           35           40           45
Gln Asp Ala Glu Ile Ala Arg Leu Met Glu Asp Leu Asp Arg Asn Lys
           50           55           60
Asp Gln Glu Val Asn Phe Gln Glu Tyr Val Thr Phe Leu Gly Ala Leu
65           70           75           80
Ala Leu Ile Tyr Asn Glu Ala Leu Lys Gly
           85           90

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<210> 277

<211> 3151

<212> DNA

<213> Homo sapiens

<400> 277

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284

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<210> 278

<211> 669

<212> PRT

<213> Homo sapiens

<400> 278

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Ile Glu Phe His Arg Ser Tyr Arg Glu Leu Phe Glu Phe Phe Cys Asn
50 55 60
Asn Thr Thr Ile His Gly Ala Ile Arg Leu Val Cys Ser Gln His Asn
65 70 75 80
Arg Met Lys Thr Ala Phe Trp Ala Val Leu Trp Leu Cys Thr Phe Gly
85 90 95
Met Met Tyr Trp Gln Phe Gly Leu Leu Phe Gly Glu Tyr Phe Ser Tyr
100 105 110
Pro Val Ser Leu Asn Ile Asn Leu Asn Ser Asp Lys Leu Val Phe Pro
115 120 125
Ala Val Thr Ile Cys Thr Leu Asn Pro Tyr Arg Tyr Pro Glu Ile Lys
130 135 140
Glu Glu Leu Glu Glu Leu Asp Arg Ile Thr Glu Gln Thr Leu Phe Asp
145 150 155 160
Leu Tyr Lys Tyr Ser Ser Phe Thr Thr Leu Val Ala Gly Ser Arg Ser
165 170 175
Arg Arg Asp Leu Arg Gly Thr Leu Pro His Pro Leu Gln Arg Leu Arg
180 185 190
Val Pro Pro Pro His Gly Ala Arg Arg Ala Arg Ser Val Ala Ser
195 200 205
Ser Leu Arg Asp Asn Asn Pro Gln Val Asp Trp Lys Asp Trp Lys Ile
210 215 220
Gly Phe Gln Leu Cys Asn Gln Asn Lys Ser Asp Cys Phe Tyr Gln Thr
225 230 235 240
Tyr Ser Ser Gly Val Asp Ala Val Arg Glu Trp Tyr Arg Phe His Tyr
245 250 255
Ile Asn Ile Leu Ser Arg Leu Pro Glu Thr Leu Pro Ser Leu Glu Glu
260 265 270

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285

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Cys Tyr Thr Phe Asn Asp Lys Asn Asn Ser Asn Leu Trp Met Ser Ser
305                310                315                320
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Asn Asp Phe Ile Pro Leu Leu Ser Thr Val Thr Gly Ala Arg Val Met
      340                345                350
Val His Gly Gln Asp Glu Pro Ala Phe Met Asp Asp Gly Gly Phe Asn
      355                360                365
Leu Arg Pro Gly Val Glu Thr Ser Ile Ser Met Arg Lys Glu Thr Leu
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385                390                395                400
Val Pro Val Glu Asn Leu Tyr Pro Ser Lys Tyr Thr Gln Gln Val Cys
      405                410                415
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Tyr Ile Phe Tyr Pro Arg Pro Gln Asn Val Glu Tyr Cys Asp Tyr Arg
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Lys His Ser Ser Trp Gly Tyr Cys Tyr Tyr Lys Leu Gln Val Asp Phe
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465                470                475                480
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Leu Val Ile Met Phe Leu Met Leu Leu Arg Arg Phe Arg Ser Arg Tyr
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Ser Leu Ser Gln Pro Gly Pro Ala Pro Ser Pro Ala Leu Thr Ala Pro
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<210> 279

<211> 3174

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature
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<400> 279

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<210> 280
 <211> 669
 <212> PRT
 <213> Homo sapiens

<400> 280

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			20					25					30		
Pro	Glu	Pro	Ala	Ala	Pro	Gln	Gln	Pro	Thr	Ala	Glu	Glu	Glu	Ala	Leu
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Asn	Thr	Thr	Ile	His	Gly	Ala	Ile	Arg	Leu	Val	Cys	Ser	Gln	His	Asn
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Pro	Val	Ser	Leu	Asn	Ile	Asn	Leu	Asn	Ser	Asp	Lys	Leu	Val	Phe	Pro
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Leu	Tyr	Lys	Tyr	Ser	Ser	Phe	Thr	Thr	Leu	Val	Ala	Gly	Ser	Arg	Ser
				165				170						175	
Arg	Arg	Asp	Leu	Arg	Gly	Thr	Leu	Pro	His	Pro	Leu	Gln	Arg	Leu	Arg
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Ile	Asn	Ile	Leu	Ser	Arg	Leu	Pro	Glu	Thr	Leu	Pro	Ser	Leu	Glu	Glu
			260					265					270		
Asp	Thr	Leu	Gly	Asn	Phe	Ile	Phe	Ala	Cys	Arg	Phe	Asn	Gln	Val	Ser
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Cys	Asn	Gln	Ala	Asn	Tyr	Ser	His	Phe	His	His	Pro	Met	Tyr	Gly	Asn
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Cys	Tyr	Thr	Phe	Asn	Asp	Lys	Asn	Asn	Ser	Asn	Leu	Trp	Met	Ser	Ser
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Met	Pro	Gly	Ile	Asn	Asn	Gly	Leu	Ser	Leu	Met	Leu	Arg	Ala	Glu	Gln
				325				330						335	
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Val	His	Gly	Gln	Asp	Glu	Pro	Ala	Phe	Met	Asp	Asp	Gly	Gly	Phe	Asn
		355					360					365			
Leu	Arg	Pro	Gly	Val	Glu	Thr	Ser	Ile	Ser	Met	Arg	Lys	Glu	Thr	Leu
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Asp	Arg	Leu	Gly	Gly	Asp	Tyr	Gly	Asp	Cys	Thr	Lys	Asn	Gly	Ser	Asp
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288

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Lys	His	Ser	Ser	Trp	Gly	Tyr	Cys	Tyr	Tyr	Lys	Leu	Gln	Val	Asp	Phe
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Val	Thr	Ser	Tyr	Gln	Leu	Ser	Ala	Gly	Tyr	Ser	Arg	Trp	Pro	Ser	Val
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Thr	Ser	Gln	Glu	Trp	Val	Phe	Gln	Met	Leu	Ser	Arg	Gln	Asn	Asn	Tyr
		500						505					510		
Thr	Val	Asn	Asn	Lys	Arg	Asn	Gly	Val	Ala	Lys	Val	Asn	Ile	Phe	Phe
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Val	Thr	Leu	Leu	Ser	Asn	Leu	Gly	Ser	Gln	Trp	Ser	Leu	Trp	Phe	Gly
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Ser	Ser	Val	Leu	Ser	Val	Val	Glu	Met	Ala	Glu	Leu	Val	Phe	Asp	Leu
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Leu	Val	Ile	Met	Phe	Leu	Met	Leu	Leu	Arg	Arg	Phe	Arg	Ser	Arg	Tyr
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Trp	Ser	Pro	Gly	Arg	Gly	Gly	Arg	Gly	Ala	Gln	Glu	Val	Ala	Ser	Thr
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Leu	Ala	Ser	Ser	Pro	Pro	Ser	His	Phe	Cys	Pro	His	Pro	Met	Ser	Leu
	610					615					620				
Ser	Leu	Ser	Gln	Pro	Gly	Pro	Ala	Pro	Ser	Pro	Ala	Leu	Thr	Ala	Pro
625					630					635					640
Pro	Pro	Ala	Tyr	Ala	Thr	Leu	Gly	Pro	Arg	Pro	Ser	Pro	Gly	Gly	Ser
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<210> 281

<211> 2892

<212> DNA

<213> Homo sapiens

<400> 281

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<210> 282

<211> 176

<212> PRT

<213> Homo sapiens

<400> 282

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20          25          30
Arg Thr Tyr Ser Gly Ala Phe Val Cys Leu Glu Ile Leu Phe Gly Gly
35          40          45
Leu Val Trp Ile Leu Val Ala Ser Ser Asn Val Pro Leu Pro Leu Leu
50          55          60
Gln Gly Trp Val Met Phe Val Ser Val Thr Ala Phe Phe Phe Ser Leu
65          70          75          80
Leu Phe Leu Gly Met Phe Leu Ser Gly Met Val Ala Gln Ile Asp Ala
85          90          95
Asn Trp Asn Phe Leu Asp Phe Ala Tyr His Phe Thr Val Phe Val Phe
100         105         110
Tyr Phe Gly Ala Phe Leu Leu Glu Ala Ala Ala Thr Ser Leu His Asp
115         120         125
Leu His Cys Asn Thr Thr Ile Thr Gly Gln Pro Leu Leu Ser Asp Asn
130         135         140
Gln Tyr Asn Ile Asn Val Ala Ala Ser Ile Phe Ala Phe Met Thr Thr

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290

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 <212> DNA
 <213> Homo sapiens

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<210> 284
 <211> 771
 <212> PRT

<213> Homo sapiens

<400> 284

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          20           25           30
Lys Leu Ser Tyr Lys Glu Met Leu Glu Ser Asn Asn Val Ile Thr Phe
          35           40           45
Asn Gly Leu Ala Asn Ser Ser Ser Tyr His Thr Phe Leu Leu Asp Glu
          50           55           60
Glu Arg Ser Arg Leu Tyr Val Gly Ala Lys Asp His Ile Phe Ser Phe
65           70           75           80
Asp Leu Val Asn Ile Lys Asp Phe Gln Lys Ile Val Trp Pro Val Ser
          85           90           95
Tyr Thr Arg Arg Asp Glu Cys Lys Trp Ala Gly Lys Asp Ile Leu Lys
          100          105          110
Glu Cys Ala Asn Phe Ile Lys Val Leu Lys Ala Tyr Asn Gln Thr His
          115          120          125
Leu Tyr Ala Cys Gly Thr Gly Ala Phe His Pro Ile Cys Thr Tyr Ile
          130          135          140
Glu Ile Gly His His Pro Glu Asp Asn Ile Phe Lys Leu Glu Asn Ser
145          150          155          160
His Phe Glu Asn Gly Arg Gly Lys Ser Pro Tyr Asp Pro Lys Leu Leu
          165          170          175
Thr Ala Ser Leu Leu Ile Asp Gly Glu Leu Tyr Ser Gly Thr Ala Ala
          180          185          190
Asp Phe Met Gly Arg Asp Phe Ala Ile Phe Arg Thr Leu Gly His His
          195          200          205
His Pro Ile Arg Thr Glu Gln His Asp Ser Arg Trp Leu Asn Asp Pro
210          215          220
Lys Phe Ile Ser Ala His Leu Ile Ser Glu Ser Asp Asn Pro Glu Asp
225          230          235          240
Asp Lys Val Tyr Phe Phe Phe Arg Glu Asn Ala Ile Asp Gly Glu His
          245          250          255
Ser Gly Lys Ala Thr His Ala Arg Ile Gly Gln Ile Cys Lys Asn Asp
          260          265          270
Phe Gly Gly His Arg Ser Leu Val Asn Lys Trp Thr Thr Phe Leu Lys
          275          280          285
Ala Arg Leu Ile Cys Ser Val Pro Gly Pro Asn Gly Ile Asp Thr His
290          295          300
Phe Asp Glu Leu Gln Asp Val Phe Leu Met Asn Phe Lys Asp Pro Lys
305          310          315          320
Asn Pro Val Val Tyr Gly Val Phe Thr Thr Ser Ser Asn Ile Phe Lys
          325          330          335
Gly Ser Ala Val Cys Met Tyr Ser Met Ser Asp Val Arg Arg Val Phe
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Leu Gly Pro Tyr Ala His Arg Asp Gly Pro Asn Tyr Gln Trp Val Pro
          355          360          365
Tyr Gln Gly Arg Val Pro Tyr Pro Arg Pro Gly Thr Cys Pro Ser Lys
          370          375          380
Thr Phe Gly Gly Phe Asp Ser Thr Lys Asp Leu Pro Asp Asp Val Ile
385          390          395          400
Thr Phe Ala Arg Ser His Pro Ala Met Tyr Asn Pro Val Phe Pro Met
          405          410          415
Asn Asn Arg Pro Ile Val Ile Lys Thr Asp Val Asn Tyr Gln Phe Thr
          420          425          430
Gln Ile Val Val Asp Arg Val Asp Ala Glu Asp Gly Gln Tyr Asp Val

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292

435 440 445
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 Thr Val Phe Arg Glu Pro Thr Ala Ile Ser Ala Met Glu Leu Ser Thr
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 Pro Leu His Arg Cys Asp Ile Tyr Gly Lys Ala Cys Ala Glu Cys Cys
 515 520 525
 Leu Ala Arg Asp Pro Tyr Cys Ala Trp Asp Gly Ser Ala Cys Ser Arg
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 Tyr Phe Pro Thr Ala Lys Arg Arg Thr Arg Arg Gln Asp Ile Arg Asn
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 Gly Asp Pro Leu Thr His Cys Ser Asp Leu His His Asp Asn His His
 565 570 575
 Gly His Ser Pro Glu Glu Arg Ile Ile Tyr Gly Val Glu Asn Ser Ser
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 Thr Phe Leu Glu Cys Ser Pro Lys Ser Gln Arg Ala Leu Val Tyr Trp
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 Gln Phe Gln Arg Arg Asn Glu Glu Arg Lys Glu Glu Ile Arg Val Asp
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 Asp His Ile Ile Arg Thr Asp Gln Gly Leu Leu Leu Arg Ser Leu Gln
 625 630 635 640
 Gln Lys Asp Ser Gly Asn Tyr Leu Cys His Ala Val Glu His Gly Phe
 645 650 655
 Ile Gln Thr Leu Leu Lys Val Thr Leu Glu Val Ile Asp Thr Glu His
 660 665 670
 Leu Glu Glu Leu Leu His Lys Asp Asp Asp Gly Asp Gly Ser Lys Thr
 675 680 685
 Lys Glu Met Ser Asn Ser Met Thr Pro Ser Gln Lys Val Trp Tyr Arg
 690 695 700
 Asp Phe Met Gln Leu Ile Asn His Pro Asn Leu Asn Thr Met Asp Glu
 705 710 715 720
 Phe Cys Glu Gln Val Trp Lys Arg Asp Arg Lys Gln Arg Arg Gln Arg
 725 730 735
 Pro Gly His Thr Pro Gly Asn Ser Asn Lys Trp Lys His Leu Gln Glu
 740 745 750
 Asn Lys Lys Gly Arg Asn Arg Arg Thr His Glu Phe Glu Arg Ala Pro
 755 760 765
 Arg Ser Val
 770

<210> 285

<211> 3041

<212> DNA

<213> Homo sapiens

<400> 285

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293

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<210> 286

<211> 418

<212> PRT

<213> Homo sapiens

<400> 286

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      20              25             30
Gln Lys Thr Asp Thr Ser His His Asp Gln Asp His Pro Thr Phe Asn
      35              40             45
Lys Ile Thr Pro Asn Leu Ala Glu Phe Ala Phe Ser Leu Tyr Arg Gln

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294

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Ile Ala Thr Ala Phe	Ala Met Leu Ser Leu Gly Thr Lys Ala Asp Thr	80
	85	90
His Asp Glu Ile Leu	Glu Gly Leu Asn Phe Asn Leu Thr Glu Ile Pro	95
	100	105
Glu Ala Gln Ile His	Glu Gly Phe Gln Glu Leu Leu Arg Thr Leu Asn	110
	115	120
Gln Pro Asp Ser Gln	Leu Gln Leu Thr Thr Gly Asn Gly Leu Phe Leu	125
	130	135
Ser Glu Gly Leu Lys	Leu Val Asp Lys Phe Leu Glu Asp Val Lys Lys	140
145	150	155
Leu Tyr His Ser Glu	Ala Phe Thr Val Asn Phe Gly Asp Thr Glu Glu	160
	165	170
Ala Lys Lys Gln Ile	Asn Asp Tyr Val Glu Lys Gly Thr Gln Gly Lys	175
	180	185
Ile Val Asp Leu Val	Lys Glu Leu Asp Arg Asp Thr Val Phe Ala Leu	190
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Val Asn Tyr Ile Phe	Phe Lys Gly Lys Trp Glu Arg Pro Phe Glu Val	205
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Lys Asp Thr Glu Glu	Glu Asp Phe His Val Asp Gln Val Thr Thr Val	220
225	230	235
Lys Val Pro Met Met	Lys Arg Leu Gly Met Phe Asn Ile Gln His Cys	240
	245	250
Lys Lys Leu Ser Ser	Trp Val Leu Leu Met Lys Tyr Leu Gly Asn Ala	255
	260	265
Thr Ala Ile Phe Phe	Leu Pro Asp Glu Gly Lys Leu Gln His Leu Glu	270
	275	280
Asn Glu Leu Thr His	Asp Ile Ile Thr Lys Phe Leu Glu Asn Glu Asp	285
	290	295
Arg Arg Ser Ala Ser	Leu His Leu Pro Lys Leu Ser Ile Thr Gly Thr	300
305	310	315
Tyr Asp Leu Lys Ser	Val Leu Gly Gln Leu Gly Ile Thr Lys Val Phe	320
	325	330
Ser Asn Gly Ala Asp	Leu Ser Gly Val Thr Glu Glu Ala Pro Leu Lys	335
	340	345
Leu Ser Lys Ala Val	His Lys Ala Val Leu Thr Ile Asp Glu Lys Gly	350
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Thr Glu Ala Ala Gly	Ala Met Phe Leu Glu Ala Ile Pro Met Ser Ile	365
	370	375
Pro Pro Glu Val Lys	Phe Asn Lys Pro Phe Val Phe Leu Met Ile Glu	380
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<210> 287

<211> 3928

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(3928)

<223> n = A,T,C or G

<400> 287

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296

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<210> 288

<211> 293

<212> PRT

<213> Homo sapiens

<400> 288

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      20          25          30
Trp Asn Trp Ile Trp Arg Arg Cys Cys Arg Ala Ala Ser Ala Ala Val
      35          40          45
Leu Ala Pro Leu Gly Phe Thr Leu Arg Lys Pro Pro Ala Val Gly Arg
      50          55          60
Asn Arg Arg His His Arg His Pro Arg Gly Gly Ser Cys Leu Ala Ala
  65          70          75          80
Ala His His Arg Met Arg Trp Arg Ala Asp Gly Arg Ser Leu Glu Lys
      85          90          95
Leu Pro Val His Met Gly Leu Val Ile Thr Glu Val Glu Gln Glu Pro
      100          105          110
Ser Phe Ser Asp Ile Ala Ser Leu Val Val Trp Cys Met Ala Val Gly
      115          120          125
Ile Ser Tyr Ile Ser Val Tyr Asp His Gln Gly Ile Phe Lys Arg Asn
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Asn Ser Arg Leu Met Asp Glu Ile Leu Lys Gln Gln Gln Glu Leu Leu
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Gly Leu Asp Cys Ser Lys Tyr Ser Pro Glu Phe Ala Asn Ser Asn Asp
      165          170          175
Lys Asp Asp Gln Val Leu Asn Cys His Leu Ala Val Lys Val Leu Ser
      180          185          190
Pro Glu Asp Gly Lys Ala Asp Ile Val Arg Ala Ala Gln Asp Phe Cys
      195          200          205
Gln Leu Val Ala Gln Lys Gln Lys Arg Pro Thr Asp Leu Asp Val Asp
      210          215          220
Thr Leu Ala Ser Leu Leu Ser Ser Asn Gly Cys Pro Asp Pro Asp Leu
  225          230          235          240
Val Leu Lys Phe Gly Pro Val Asp Ser Thr Leu Gly Phe Leu Pro Trp
      245          250          255
His Ile Arg Leu Thr Glu Ile Val Ser Leu Pro Ser His Leu Asn Ile
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 <212> DNA
 <213> Homo sapiens

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 <211> 248
 <212> PRT
 <213> Homo sapiens

<400> 290
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 35 40 45
 Gly Val Glu Lys Leu Val Leu Ser Lys Leu Tyr Glu Glu Gly Ser Asn
 50 55 60
 Lys Arg Leu Phe Asn Val Asp Arg His Val Gly Met Ala Val Ala Gly
 65 70 75 80
 Leu Leu Ala Asp Ala Arg Ser Leu Ala Asp Ile Ala Arg Glu Glu Ala
 85 90 95
 Ser Asn Phe Arg Ser Asn Phe Gly Tyr Asn Ile Pro Leu Lys His Leu
 100 105 110
 Ala Asp Arg Val Ala Met Tyr Val His Ala Tyr Thr Leu Tyr Ser Ala
 115 120 125
 Val Arg Pro Phe Gly Cys Ser Val Asn Asp Gly Ala Gln Leu Tyr Met
 130 135 140
 Ile Asp Pro Ser Gly Val Ser Tyr Gly Tyr Trp Gly Cys Ala Ile Gly
 145 150 155 160
 Lys Ala Arg Gln Ala Ala Lys Thr Glu Ile Glu Lys Leu Gln Met Lys
 165 170 175
 Glu Met Thr Cys Arg Asp Ile Val Lys Glu Val Ala Lys Ile Ile Tyr
 180 185 190
 Ile Val His Asp Glu Val Lys Asp Lys Ala Phe Glu Leu Glu Leu Ser
 195 200 205
 Trp Val Gly Glu Leu Thr Asn Gly Arg His Glu Ile Val Pro Lys Asp
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<210> 291
<211> 2782
<212> DNA
<213> Homo sapiens

<400> 291

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299

<210> 292
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 292

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		35				40						45			
Asp	Gln	Asn	Ile	Glu	Asp	Pro	Phe	Lys	Ile	Pro	Arg	Arg	Asn	Ile	Ser
	50				55					60					
His	Ile	Pro	Glu	Arg	Leu	Cys	Glu	Ser	Lys	Glu	Gly	Gly	Gln	Gly	Glu
65				70					75					80	
Glu	Thr	Phe	Ser	Gln	Ile	Pro	Asp	Gly	Ile	Leu	Asn	Lys	Lys	Thr	Pro
			85					90						95	
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Pro	Ser	Ser	Leu	Asn	Arg	His	Ile	Arg	Asp	His	Thr	Gly	Arg	Glu	Pro
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Asn	Glu	Tyr	Gln	Glu	Tyr	Gly	Lys	Lys	Ser	Tyr	Thr	Arg	Asn	Gln	Cys
	130					135					140				
Gly	Arg	Ala	Leu	Ser	Tyr	His	Arg	Ser	Phe	Pro	Val	Arg	Glu	Arg	Thr
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His	Pro	Gly	Gly	Lys	Pro	Tyr	Asp	Cys	Lys	Glu	Cys	Gly	Glu	Thr	Phe
			165					170						175	
Ile	Ser	Leu	Val	Ser	Ile	Arg	Arg	His	Met	Leu	Thr	His	Arg	Gly	Gly
		180						185					190		
Val	Pro	Tyr	Lys	Cys	Lys	Val	Cys	Gly	Lys	Ala	Phe	Asp	Tyr	Pro	Ser
		195				200						205			
Leu	Phe	Arg	Ile	His	Glu	Arg	Ser	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu
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Cys	Lys	Gln	Cys	Gly	Lys	Ala	Phe	Ser	Cys	Ser	Ser	Tyr	Ile	Arg	Ile
225				230					235					240	
His	Glu	Arg	Thr	His	Thr	Gly	Asp	Lys	Pro	Tyr	Glu	Cys	Lys	Gln	Cys
			245					250						255	
Gly	Lys	Ala	Phe	Ser	Cys	Ser	Lys	Tyr	Ile	Arg	Ile	His	Glu	Arg	Thr
		260						265					270		
His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys	Lys	Gln	Cys	Gly	Lys	Ala	Phe
	275						280					285			
Arg	Cys	Ala	Ser	Ser	Val	Arg	Ser	His	Glu	Arg	Thr	His	Thr	Gly	Glu
	290					295					300				
Lys	Leu	Phe	Glu	Cys	Lys	Glu	Cys	Gly	Lys	Ala	Leu	Thr	Cys	Leu	Ala
305				310					315					320	
Ser	Val	Arg	Arg	His	Met	Ile	Lys	His	Thr	Gly	Asn	Gly	Pro	Tyr	Lys
			325					330						335	
Cys	Lys	Val	Cys	Gly	Lys	Ala	Phe	Asp	Phe	Pro	Ser	Ser	Phe	Arg	Ile
		340						345					350		
His	Glu	Arg	Thr	His	Thr	Gly	Glu	Lys	Pro	Tyr	Asp	Cys	Lys	Gln	Cys
	355					360						365			
Gly	Lys	Ala	Phe	Ser	Cys	Ser	Ser	Ser	Phe	Arg	Lys	His	Glu	Arg	Ile
	370					375					380				
His	Thr	Gly	Glu	Lys	Pro	Tyr	Lys	Cys	Thr	Lys	Cys	Gly	Lys	Ala	Phe
385				390					395					400	
Ser	Arg	Ser	Ser	Tyr	Phe	Arg	Ile	His	Glu	Arg	Thr	His	Thr	Gly	Glu
			405					410						415	

300

Lys Pro Tyr Glu Cys Lys Gln Cys Gly Lys Ala Phe Ser Arg Ser Thr
 420 425 430
 Tyr Phe Arg Val His Glu Lys Ile His Thr Gly Glu Lys Pro Tyr Glu
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 450 455 460

<210> 293
 <211> 666
 <212> DNA
 <213> Homo sapiens

<400> 293
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<210> 294
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 294
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 20 25 30
 Ser Leu Trp Ser Asn Leu Gly Cys Arg Val Arg Gly Gly Val Ser Leu
 35 40 45
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<210> 295
 <211> 594
 <212> DNA
 <213> Homo sapiens

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301

caagaagtgc cagttgatca atgaataaat aaacgagcct atttctcttt gcac 594

<210> 296

<211> 132

<212> PRT

<213> Homo sapiens

<400> 296

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 20 25 30
 Gly Val Cys Pro Pro Lys Lys Ser Ala Gln Cys Leu Arg Tyr Lys Lys
 35 40 45
 Pro Glu Cys Gln Ser Asp Trp Gln Cys Pro Gly Lys Lys Arg Cys Cys
 50 55 60
 Pro Asp Thr Cys Gly Ile Lys Cys Leu Asp Pro Val Asp Thr Pro Asn
 65 70 75 80
 Pro Thr Arg Arg Lys Pro Gly Lys Cys Pro Val Thr Tyr Gly Gln Cys
 85 90 95
 Leu Met Leu Asn Pro Pro Asn Phe Cys Glu Met Asp Gly Gln Cys Lys
 100 105 110
 Arg Asp Leu Lys Cys Cys Met Gly Met Cys Gly Lys Ser Cys Val Ser
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<210> 297

<211> 720

<212> DNA

<213> Homo sapiens

<400> 297

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<210> 298

<211> 127

<212> PRT

<213> Homo sapiens

<400> 298

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302

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Val	Gln	Ser	Val	Thr	Ser	Val	Ala	Glu	Lys	Thr	Lys	Glu	Gln	Ala	Asn
	50					55				60					
Ala	Val	Ser	Glu	Ala	Val	Val	Ser	Ser	Val	Asn	Thr	Val	Ala	Thr	Lys
65					70				75					80	
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<212> DNA

<213> Homo sapiens

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304

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<211> 2214

<212> PRT

<213> Homo sapiens

<400> 300

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Asp Ala Arg Gly Ala Ser Arg Ala Asp Glu Lys Pro Leu Arg Arg Lys
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305

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306

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Lys	Cys	Asp	Leu	Glu	Asp	Asp	Cys	Gly	Asp	Asn	Ser	Asp	Glu	Ser	His	1140	1145	1150	1155
Cys	Glu	Met	His	Gln	Cys	Arg	Ser	Asp	Glu	Tyr	Asn	Cys	Ser	Ser	Gly	1155	1160	1165	

307

Met Cys Ile Arg Ser Ser Trp Val Cys Asp Gly Asp Asn Asp Cys Arg
 1170 1175 1180
 Asp Trp Ser Asp Glu Ala Asn Cys Thr Ala Ile Tyr His Thr Cys Glu
 1185 1190 1195 1200
 Ala Ser Asn Phe Gln Cys Arg Asn Gly His Cys Ile Pro Gln Arg Trp
 1205 1210 1215
 Ala Cys Asp Gly Asp Thr Asp Cys Gln Asp Gly Ser Asp Glu Asp Pro
 1220 1225 1230
 Val Asn Cys Glu Lys Lys Cys Asn Gly Phe Arg Cys Pro Asn Gly Thr
 1235 1240 1245
 Cys Ile Pro Ser Ser Lys His Cys Asp Gly Leu Arg Asp Cys Ser Asp
 1250 1255 1260
 Gly Ser Asp Glu Gln His Cys Glu Pro Leu Cys Thr His Phe Met Asp
 1265 1270 1275 1280
 Phe Val Cys Lys Asn Arg Gln Gln Cys Leu Phe His Ser Met Val Cys
 1285 1290 1295
 Asp Gly Ile Ile Gln Cys Arg Asp Gly Ser Asp Glu Asp Ala Ala Phe
 1300 1305 1310
 Ala Gly Cys Ser Gln Asp Pro Glu Phe His Lys Val Cys Asp Glu Phe
 1315 1320 1325
 Gly Phe Gln Cys Gln Asn Gly Val Cys Ile Ser Leu Ile Trp Lys Cys
 1330 1335 1340
 Asp Gly Met Asp Asp Cys Gly Asp Tyr Ser Asp Glu Ala Asn Cys Glu
 1345 1350 1355 1360
 Asn Pro Thr Glu Ala Pro Asn Cys Ser Arg Tyr Phe Gln Phe Arg Cys
 1365 1370 1375
 Glu Asn Gly His Cys Ile Pro Asn Arg Trp Lys Cys Asp Arg Glu Asn
 1380 1385 1390
 Asp Cys Gly Asp Trp Ser Asp Glu Lys Asp Cys Gly Asp Ser His Ile
 1395 1400 1405
 Leu Pro Phe Ser Thr Pro Gly Pro Ser Thr Cys Leu Pro Asn Tyr Tyr
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 Arg Cys Ser Ser Gly Thr Cys Val Met Asp Thr Trp Val Cys Asp Gly
 1425 1430 1435 1440
 Tyr Arg Asp Cys Ala Asp Gly Ser Asp Glu Glu Ala Cys Pro Leu Leu
 1445 1450 1455
 Ala Asn Val Thr Ala Ala Ser Thr Pro Thr Gln Leu Gly Arg Cys Asp
 1460 1465 1470
 Arg Phe Glu Phe Glu Cys His Gln Pro Lys Thr Cys Ile Pro Asn Trp
 1475 1480 1485
 Lys Arg Cys Asp Gly His Gln Asp Cys Gln Asp Gly Arg Asp Glu Ala
 1490 1495 1500
 Asn Cys Pro Thr His Ser Thr Leu Thr Cys Met Ser Arg Glu Phe Gln
 1505 1510 1515 1520
 Cys Glu Asp Gly Glu Ala Cys Ile Val Leu Ser Glu Arg Cys Asp Gly
 1525 1530 1535
 Phe Leu Asp Cys Ser Asp Glu Ser Asp Glu Lys Ala Cys Ser Asp Glu
 1540 1545 1550
 Leu Thr Val Tyr Lys Val Gln Asn Leu Gln Trp Thr Ala Asp Phe Ser
 1555 1560 1565
 Gly Asp Val Thr Leu Thr Trp Met Arg Pro Lys Lys Met Pro Ser Ala
 1570 1575 1580
 Ser Cys Val Tyr Asn Val Tyr Tyr Arg Val Val Gly Glu Ser Ile Trp
 1585 1590 1595 1600
 Lys Thr Leu Glu Thr His Ser Asn Lys Thr Asn Thr Val Leu Lys Val
 1605 1610 1615
 Leu Lys Pro Asp Thr Thr Tyr Gln Val Lys Val Gln Val Gln Cys Leu
 1620 1625 1630

308

Ser Lys Ala His Asn Thr Asn Asp Phe Val Thr Leu Arg Thr Pro Glu
 1635 1640 1645
 Gly Leu Pro Asp Ala Pro Arg Asn Leu Gln Leu Ser Leu Pro Arg Glu
 1650 1655 1660
 Ala Glu Gly Val Ile Val Gly His Trp Ala Pro Pro Ile His Thr His
 1665 1670 1675 1680
 Gly Leu Ile Arg Glu Tyr Ile Val Glu Tyr Ser Arg Ser Gly Ser Lys
 1685 1690 1695
 Met Trp Ala Ser Gln Arg Ala Ala Ser Asn Phe Thr Glu Ile Lys Asn
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 Leu Leu Val Asn Thr Leu Tyr Thr Val Arg Val Ala Ala Val Thr Ser
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 Arg Gly Ile Gly Asn Trp Ser Asp Ser Lys Ser Ile Thr Thr Ile Lys
 1730 1735 1740
 Gly Lys Val Ile Pro Pro Pro Asp Ile His Ile Asp Ser Tyr Gly Glu
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 Asn Tyr Leu Ser Phe Thr Leu Thr Met Glu Ser Asp Ile Lys Val Asn
 1765 1770 1775
 Gly Tyr Val Val Asn Leu Phe Trp Ala Phe Asp Thr His Lys Gln Glu
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 Arg Arg Thr Leu Asn Phe Arg Gly Ser Ile Leu Ser His Lys Val Gly
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 Asn Leu Thr Ala His Thr Ser Tyr Glu Ile Ser Ala Trp Ala Lys Thr
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 1825 1830 1835 1840
 Val Arg Pro Pro Ala Pro Ser Leu Lys Ala Lys Ala Ile Asn Gln Thr
 1845 1850 1855
 Ala Val Glu Cys Thr Trp Thr Gly Pro Arg Asn Val Val Tyr Gly Ile
 1860 1865 1870
 Phe Tyr Ala Thr Ser Phe Leu Asp Leu Tyr Arg Asn Pro Lys Ser Leu
 1875 1880 1885
 Thr Thr Ser Leu His Asn Lys Thr Val Ile Val Ser Lys Asp Glu Gln
 1890 1895 1900
 Tyr Leu Phe Leu Val Arg Val Val Val Pro Tyr Gln Gly Pro Ser Ser
 1905 1910 1915 1920
 Asp Tyr Val Val Val Lys Met Ile Pro Asp Ser Arg Leu Pro Pro Arg
 1925 1930 1935
 His Leu His Val Val His Thr Gly Lys Thr Ser Val Val Ile Lys Trp
 1940 1945 1950
 Glu Ser Pro Tyr Asp Ser Pro Asp Gln Asp Leu Leu Tyr Ala Ile Ala
 1955 1960 1965
 Val Lys Asp Leu Ile Arg Lys Thr Asp Arg Ser Tyr Lys Val Lys Ser
 1970 1975 1980
 Arg Asn Ser Thr Val Glu Tyr Thr Leu Asn Lys Leu Glu Pro Gly Gly
 1985 1990 1995 2000
 Lys Tyr His Ile Ile Val Gln Leu Gly Asn Met Ser Lys Asp Ser Ser
 2005 2010 2015
 Ile Lys Ile Thr Thr Val Ser Leu Ser Ala Pro Asp Ala Leu Lys Ile
 2020 2025 2030
 Ile Thr Glu Asn Asp His Val Leu Leu Phe Trp Lys Ser Leu Ala Leu
 2035 2040 2045
 Lys Glu Lys His Phe Asn Glu Ser Arg Gly Tyr Glu Ile His Met Phe
 2050 2055 2060
 Asp Ser Ala Met Asn Ile Thr Ala Tyr Leu Gly Asn Thr Thr Asp Asn
 2065 2070 2075 2080
 Phe Phe Lys Ile Ser Asn Leu Lys Met Gly His Asn Tyr Thr Phe Thr
 2085 2090 2095

309

Val Gln Ala Arg Cys Leu Phe Gly Asn Gln Ile Cys Gly Glu Pro Ala
 2100 2105 2110
 Ile Leu Leu Tyr Asp Glu Leu Gly Ser Gly Ala Asp Ala Ser Ala Thr
 2115 2120 2125
 Gln Ala Ala Arg Ser Thr Asp Val Ala Ala Val Val Val Pro Ile Leu
 2130 2135 2140
 Phe Leu Ile Leu Leu Ser Leu Gly Val Gly Phe Ala Ile Leu Tyr Thr
 2145 2150 2155 2160
 Lys His Arg Arg Leu Gln Ser Ser Phe Thr Ala Phe Ala Asn Ser His
 2165 2170 2175
 Tyr Ser Ser Arg Leu Gly Ser Ala Ile Phe Ser Ser Gly Asp Asp Leu
 2180 2185 2190
 Gly Glu Asp Asp Glu Asp Ala Pro Met Ile Thr Gly Phe Ser Asp Asp
 2195 2200 2205
 Val Pro Met Val Ile Ala
 2210

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 <211> 1544
 <212> DNA
 <213> Homo sapiens

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 ccacactgaa ggtccggaaa ggcgacttcc gggggctttg gcacctggcg gaccctcccg 180
 gagegtcggc acctgaacgc gaggcgctcc attgcgcgtg cgcgttgagg ggcttccgc 240
 acctgatcgc gagaccccaa cggctggtgg cgtgcgcgtg gcgtctcggc tgagctggcc 300
 atggcgagc tgtgcgggct gaggcgagc cggcgctttc tcgcctgct gggatcgctg 360
 ctctctctg ggtctcggc ggccgaccga gaacgcagca tccacgactt ctgcctggtg 420
 togaaggtg tgggcagatg ccgggcctcc atgcctaggt ggtggtacaa tgtcactgac 480
 ggatcctgcc agctgtttgt gtatgggggc tgtgacggaa acagcaataa ttacctgacc 540
 aaggaggagt gcctcaagaa atgtgcact gtcacagaga atgccacggg tgacctggcc 600
 accagcagga atgcagcgga ttcctctgtc ccaagtgtc ccagaaggca ggattctgaa 660
 gacctcca gcgatatgtt caactatgaa gaatactgca ccgccaacgc agtcaactggg 720
 ccttgccgtg catccttccc acgctggtac tttgacgtgg agaggaaactc ctgcaataac 780
 ttcactatg gaggtgccg gggcaataag aacagctacc gctctgagga ggcctgcatg 840
 ctccgtgct tccgccagca ggagaatcct cccctgcccc ttggctcaaa ggtggtggtt 900
 ctggcggggc tgttcgtgat ggtgttgatc ctcttctgag gagctccat ggtctacctg 960
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 tggggaagg aggggagact atgtgtgagc tttttttaa tagagggatt gactcggatt 1140
 tgagtgatca ttagggctga ggtctgttct tctgggaggt aggaaggctg cttcctggtc 1200
 tggcagggat ggttttctt tggaaatcct ctaggaggct cctcctcgca tggcctgcag 1260
 tctggcagca gcccaggtt gtttcctcgc tgatcgattt ctttctcca ggtagagttt 1320
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 cgtttctttt gtttgtctga tttatggttt ttttaagtat aaacaaaagt tttttattag 1440
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<210> 302
 <211> 252

310

<212> PRT

<213> Homo sapiens

<400> 302

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      20           25           30
Ser Ile His Asp Phe Cys Leu Val Ser Lys Val Val Gly Arg Cys Arg
      35           40           45
Ala Ser Met Pro Arg Trp Trp Tyr Asn Val Thr Asp Gly Ser Cys Gln
      50           55           60
Leu Phe Val Tyr Gly Gly Cys Asp Gly Asn Ser Asn Asn Tyr Leu Thr
      65           70           75           80
Lys Glu Glu Cys Leu Lys Lys Cys Ala Thr Val Thr Glu Asn Ala Thr
      85           90           95
Gly Asp Leu Ala Thr Ser Arg Asn Ala Ala Asp Ser Ser Val Pro Ser
      100          105          110
Ala Pro Arg Arg Gln Asp Ser Glu Asp His Ser Ser Asp Met Phe Asn
      115          120          125
Tyr Glu Glu Tyr Cys Thr Ala Asn Ala Val Thr Gly Pro Cys Arg Ala
      130          135          140
Ser Phe Pro Arg Trp Tyr Phe Asp Val Glu Arg Asn Ser Cys Asn Asn
      145          150          155          160
Phe Ile Tyr Gly Gly Cys Arg Gly Asn Lys Asn Ser Tyr Arg Ser Glu
      165          170          175
Glu Ala Cys Met Leu Arg Cys Phe Arg Gln Gln Glu Asn Pro Pro Leu
      180          185          190
Pro Leu Gly Ser Lys Val Val Val Leu Ala Gly Leu Phe Val Met Val
      195          200          205
Leu Ile Leu Phe Leu Gly Ala Ser Met Val Tyr Leu Ile Arg Val Ala
      210          215          220
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<210> 303

<211> 1558

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(1558)

<223> n = A,T,C or G

<400> 303

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aggcatcgcg cgcgagaag gccgggcgtc ccacactga aggtccgaa aggcgacttc 180
cgggggcttt ggcacctggc ggacctccc ggagcgtgg cacctgaacg cgaggcgctc 240
cattgcgcgt gcgcgttgag gggttcccg cacctgatcg cgagaccca acggctggtg 300
gcgtgcctg cgcgtctcgg ctgagctggc catggcgag ctgtgcgggc tgaggcggag 360
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agaacgcagc atccacgaga atgccacggg tgacctggcc accagcagga atgcagcgga 480
ttcctctgtc ccaagtgtc ccagaaggca ggattctgaa gaccactcca gcgatatgtt 540

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311

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caactatgaa gaatactgca ccgccaacgc agtcaactggg ccttgccgtg catccttccc 600
acgctgggtac tttgacgtgg agaggaactc ctgcaataac ttcatttatg gaggctgccg 660
gggcaataag aacagctacc gctctgagga ggcttgcacg ctccgctgct tccgccagca 720
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gttccctcgc tgatcgattt ctttcctcca ggtagagttt tctttgctta tgttgattc 1200
cattgcctct tttctcatca cagaagtgat gttggaatcg tttcttttgt ttgtctgatt 1260
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aggtgtccca ttctagaaat agaccctca aaatagcgtc tttcagatct ttttgatga 1500
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<210> 304

<211> 195

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)...(195)

<223> Xaa = Any Amino Acid

<400> 304

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      20             25             30
Ser Ile His Glu Asn Ala Thr Gly Asp Leu Ala Thr Ser Arg Asn Ala
      35             40             45
Ala Asp Ser Ser Val Pro Ser Ala Pro Arg Arg Gln Asp Ser Glu Asp
      50             55             60
His Ser Ser Asp Met Phe Asn Tyr Glu Glu Tyr Cys Thr Ala Asn Ala
      65             70             75             80
Val Thr Gly Pro Cys Arg Ala Ser Phe Pro Arg Trp Tyr Phe Asp Val
      85             90             95
Glu Arg Asn Ser Cys Asn Asn Phe Ile Tyr Gly Gly Cys Arg Gly Asn
      100            105            110
Lys Asn Ser Tyr Arg Ser Glu Glu Ala Cys Met Leu Arg Cys Phe Arg
      115            120            125
Gln Gln Glu Asn Pro Pro Leu Pro Leu Gly Ser Lys Val Val Xaa Leu
      130            135            140
Ala Gly Leu Phe Val Met Val Leu Ile Leu Phe Leu Gly Ala Ser Met
      145            150            155            160
Val Tyr Leu Ile Arg Val Ala Arg Arg Asn Gln Glu Arg Ala Leu Arg
      165            170            175
Thr Val Trp Ser Ser Gly Asp Asp Lys Glu Gln Leu Val Lys Asn Thr
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Tyr Val Leu
      195

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<210> 305

<211> 3079

<212> DNA

<213> Homo sapiens

<400> 305

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aagccgggaa ccagctacog cgtaacactt toagctgctc ctccctccta cttcagagga 300
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313

<210> 306
 <211> 807
 <212> PRT
 <213> Homo sapiens

<400> 306

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		20						25				30			
Thr	Leu	Asp	Lys	Val	Pro	Lys	Ser	Glu	Gly	Tyr	Cys	Ser	Arg	Ile	Leu
	35					40					45				
Arg	Ala	Gln	Gly	Thr	Arg	Arg	Glu	Gly	Tyr	Thr	Glu	Phe	Ser	Leu	Arg
	50					55					60				
Val	Glu	Gly	Asp	Pro	Asp	Phe	Tyr	Lys	Pro	Gly	Thr	Ser	Tyr	Arg	Val
65				70					75					80	
Thr	Leu	Ser	Ala	Ala	Pro	Pro	Ser	Tyr	Phe	Arg	Gly	Phe	Thr	Leu	Ile
			85						90					95	
Ala	Leu	Arg	Glu	Asn	Arg	Glu	Gly	Asp	Lys	Glu	Glu	Asp	His	Ala	Gly
		100						105					110		
Thr	Phe	Gln	Ile	Ile	Asp	Glu	Glu	Glu	Thr	Gln	Phe	Met	Ser	Asn	Cys
	115					120						125			
Pro	Val	Ala	Val	Thr	Glu	Ser	Thr	Pro	Arg	Arg	Arg	Thr	Arg	Ile	Gln
	130					135						140			
Val	Phe	Trp	Ile	Ala	Pro	Pro	Ala	Gly	Thr	Gly	Cys	Val	Ile	Leu	Lys
145				150						155				160	
Ala	Ser	Ile	Val	Gln	Lys	Arg	Ile	Ile	Tyr	Phe	Gln	Asp	Glu	Gly	Ser
			165						170					175	
Leu	Thr	Lys	Lys	Leu	Cys	Glu	Gln	Asp	Ser	Thr	Phe	Asp	Gly	Val	Thr
		180						185					190		
Asp	Lys	Pro	Ile	Leu	Asp	Cys	Cys	Ala	Cys	Gly	Thr	Ala	Lys	Tyr	Arg
	195					200						205			
Leu	Thr	Phe	Tyr	Gly	Asn	Trp	Ser	Glu	Lys	Thr	His	Pro	Lys	Asp	Tyr
	210				215						220				
Pro	Arg	Arg	Ala	Asn	His	Trp	Ser	Ala	Ile	Ile	Gly	Gly	Ser	His	Ser
225				230						235				240	
Lys	Asn	Tyr	Val	Leu	Trp	Glu	Tyr	Gly	Gly	Tyr	Ala	Ser	Glu	Gly	Val
			245						250					255	
Lys	Gln	Val	Ala	Glu	Leu	Gly	Ser	Pro	Val	Lys	Met	Glu	Glu	Glu	Ile
	260					265						270			
Arg	Gln	Gln	Ser	Asp	Glu	Val	Leu	Thr	Val	Ile	Lys	Ala	Lys	Ala	Gln
	275					280						285			
Trp	Pro	Ala	Trp	Gln	Pro	Leu	Asn	Val	Arg	Ala	Ala	Pro	Ser	Ala	Glu
	290					295					300				
Phe	Ser	Val	Asp	Arg	Thr	Arg	His	Leu	Met	Ser	Phe	Leu	Thr	Met	Met
305				310						315				320	
Gly	Pro	Ser	Pro	Asp	Trp	Asn	Val	Gly	Leu	Ser	Ala	Glu	Asp	Leu	Cys
			325						330					335	
Thr	Lys	Glu	Cys	Gly	Trp	Val	Gln	Lys	Val	Val	Gln	Asp	Leu	Ile	Pro
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314

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<212> DNA

<213> Homo sapiens

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<213> Homo sapiens

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<210> 310

<211> 835

<212> PRT

<213> Homo sapiens

<400> 310

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           20           25           30
Cys Ala Gly Gly Ser Gly Gln Asn Gln Pro Ser Leu Leu Pro Leu Leu
           35           40           45
Arg Arg Gly Pro Pro Leu Leu Ala Leu Leu Ser Phe Ala Trp Leu Ser
           50           55           60
Ser Ala Gln Leu Ser Ala Ala Pro Arg Pro Pro Ser Arg Gly Gly His
           65           70           75           80
Gly Leu Arg Val Ala Asp Ala Ser Ser Glu Leu Pro Leu Ser Ala Ala
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Pro Pro Pro Gly Arg Ala Phe Val Gly Thr Thr Ser Gly Arg Ser Arg
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Val Ala Lys Ala Cys Gly Arg Gly Thr Lys Leu Gly Ala Ala Lys Met
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Arg Leu Ser Pro Ala Pro Leu Lys Leu Ser Arg Thr Pro Ala Leu Leu
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Ala Leu Ala Leu Pro Leu Ala Ala Ala Leu Ala Phe Ser Asp Glu Thr
           145          150          155          160
Leu Asp Lys Val Pro Lys Ser Glu Gly Tyr Cys Ser Arg Ile Leu Arg
           165          170          175
Ala Gln Gly Thr Arg Arg Glu Gly Tyr Thr Glu Phe Ser Leu Arg Val
           180          185          190
Glu Gly Asp Pro Asp Phe Tyr Lys Pro Gly Thr Ser Tyr Arg Val Thr
           195          200          205
Leu Ser Ala Ala Pro Pro Ser Tyr Phe Arg Gly Phe Thr Leu Ile Ala
           210          215          220
Leu Arg Glu Asn Arg Glu Gly Asp Lys Glu Glu Asp His Ala Gly Thr
           225          230          235          240

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321

Phe Gln Ile Ile Asp Glu Glu Glu Thr Gln Phe Met Ser Asn Cys Pro
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 Val Ala Val Thr Glu Ser Thr Pro Arg Arg Arg Thr Arg Ile Gln Val
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 Phe Trp Ile Ala Pro Pro Ala Gly Thr Gly Cys Val Ile Leu Lys Ala
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 Ser Ile Val Gln Lys Arg Ile Ile Tyr Phe Gln Asp Glu Gly Ser Leu
 290 295 300
 Thr Lys Lys Leu Cys Glu Gln Asp Ser Thr Phe Asp Gly Val Thr Asp
 305 310 315 320
 Lys Pro Ile Leu Asp Cys Cys Ala Cys Gly Thr Ala Lys Tyr Arg Leu
 325 330 335
 Thr Phe Tyr Gly Asn Trp Ser Glu Lys Thr His Pro Lys Asp Tyr Pro
 340 345 350
 Arg Arg Ala Asn His Trp Ser Ala Ile Ile Gly Gly Ser His Ser Lys
 355 360 365
 Asn Tyr Val Leu Trp Glu Tyr Gly Gly Tyr Ala Ser Glu Gly Val Lys
 370 375 380
 Gln Val Ala Glu Leu Gly Ser Pro Val Lys Met Glu Glu Glu Ile Arg
 385 390 395 400
 Gln Gln Ser Asp Glu Val Leu Thr Val Ile Lys Ala Lys Ala Gln Trp
 405 410 415
 Pro Ala Trp Gln Pro Leu Asn Val Arg Ala Ala Pro Ser Ala Glu Phe
 420 425 430
 Ser Val Asp Arg Thr Arg His Leu Met Ser Phe Leu Thr Met Met Gly
 435 440 445
 Pro Ser Pro Asp Trp Asn Val Gly Leu Ser Ala Glu Asp Leu Cys Thr
 450 455 460
 Lys Glu Cys Gly Trp Val Gln Lys Val Val Gln Asp Leu Ile Pro Trp
 465 470 475 480
 Asp Ala Gly Thr Asp Ser Gly Val Thr Tyr Glu Ser Pro Asn Lys Pro
 485 490 495
 Thr Ile Pro Gln Glu Lys Ile Arg Pro Leu Thr Ser Leu Asp His Pro
 500 505 510
 Gln Ser Pro Phe Tyr Asp Pro Glu Gly Gly Ser Ile Thr Gln Val Ala
 515 520 525
 Arg Val Val Ile Glu Arg Ile Ala Arg Lys Gly Glu Gln Cys Asn Ile
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 Val Pro Asp Asn Val Asp Asp Ile Val Ala Asp Leu Ala Pro Glu Glu
 545 550 555 560
 Lys Asp Glu Asp Asp Thr Pro Glu Thr Cys Ile Tyr Ser Asn Trp Ser
 565 570 575
 Pro Trp Ser Ala Cys Ser Ser Ser Thr Cys Asp Lys Gly Lys Arg Met
 580 585 590
 Arg Gln Arg Met Leu Lys Ala Gln Leu Asp Leu Ser Val Pro Cys Pro
 595 600 605
 Asp Thr Gln Asp Phe Gln Pro Cys Met Gly Pro Gly Cys Ser Asp Glu
 610 615 620
 Asp Gly Ser Thr Cys Thr Met Ser Glu Trp Ile Thr Trp Ser Pro Cys
 625 630 635 640
 Ser Ile Ser Cys Gly Met Gly Met Arg Ser Arg Glu Arg Tyr Val Lys
 645 650 655
 Gln Phe Pro Glu Asp Gly Ser Val Cys Thr Leu Pro Thr Glu Glu Thr
 660 665 670
 Glu Lys Cys Thr Val Asn Glu Glu Cys Ser Pro Ser Ser Cys Leu Met
 675 680 685
 Thr Glu Trp Gly Glu Trp Asp Glu Cys Ser Ala Thr Cys Gly Met Gly
 690 695 700

322

Met Lys Lys Arg His Arg Met Ile Lys Met Asn Pro Ala Asp Gly Ser
 705 710 715 720
 Met Cys Lys Ala Glu Thr Ser Gln Ala Glu Lys Cys Met Met Pro Glu
 725 730 735
 Cys His Thr Ile Pro Cys Leu Leu Ser Pro Trp Ser Glu Trp Ser Asp
 740 745 750
 Cys Ser Val Thr Cys Gly Lys Gly Met Arg Thr Arg Gln Arg Met Leu
 755 760 765
 Lys Ser Leu Ala Glu Leu Gly Asp Cys Asn Glu Asp Leu Glu Gln Val
 770 775 780
 Glu Lys Cys Met Leu Pro Glu Cys Pro Ile Asp Cys Glu Leu Thr Glu
 785 790 795 800
 Trp Ser Gln Trp Ser Glu Cys Asn Lys Ser Cys Gly Lys Gly His Val
 805 810 815
 Ile Arg Thr Arg Met Ile Gln Met Glu Pro Gln Phe Leu Gln Ser Leu
 820 825 830
 Leu Glu Ser
 835

<210> 311

<211> 3112

<212> DNA

<213> Homo sapiens

<400> 311

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323

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cagcgccccct ggggtgcagg agcgacggct caagcgcatc atctcccacc ccttcttcaa 2100
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<210> 312

<211> 782

<212> PRT

<213> Homo sapiens

<400> 312

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      20             25             30
Glu Glu Gly Val Glu Phe Leu Pro Val Asn Asn Val Lys Lys Val Glu
      35             40             45
Lys His Gly Pro Gly Arg Trp Val Val Leu Ala Ala Val Leu Ile Gly
      50             55             60
Leu Leu Leu Val Leu Leu Gly Ile Gly Phe Leu Val Trp His Leu Gln
      65             70             75             80
Tyr Arg Asp Val Arg Val Gln Lys Val Phe Asn Gly Tyr Met Arg Ile
      85             90             95
Thr Asn Glu Asn Phe Val Asp Ala Tyr Glu Asn Ser Asn Ser Thr Glu
      100            105            110
Phe Val Ser Leu Ala Ser Lys Val Lys Asp Ala Leu Lys Leu Leu Tyr
      115            120            125
Ser Gly Val Pro Phe Leu Gly Pro Tyr His Lys Glu Ser Ala Val Thr
      130            135            140
Ala Phe Ser Glu Gly Ser Val Ile Ala Tyr Tyr Trp Ser Glu Phe Ser
      145            150            155            160
Ile Pro Gln His Leu Val Glu Glu Ala Glu Arg Val Met Ala Glu Glu
      165            170            175
Arg Val Val Met Leu Pro Pro Arg Ala Arg Ser Leu Lys Ser Phe Val
      180            185            190
Val Thr Ser Val Val Ala Phe Pro Thr Asp Ser Lys Thr Val Gln Arg
      195            200            205
Thr Gln Asp Asn Ser Cys Ser Phe Gly Leu His Ala Arg Gly Val Glu
      210            215            220
Leu Met Arg Phe Thr Thr Pro Gly Phe Pro Asp Ser Pro Tyr Pro Ala
      225            230            235            240
His Ala Arg Cys Gln Trp Ala Leu Arg Gly Asp Ala Asp Ser Val Leu

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324

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		275					280					285				
Ala	Leu	Val	Gln	Leu	Cys	Gly	Thr	Tyr	Pro	Pro	Ser	Tyr	Asn	Leu	Thr	
		290				295					300					
Phe	His	Ser	Ser	Gln	Asn	Val	Leu	Leu	Ile	Thr	Leu	Ile	Thr	Asn	Thr	
305					310					315					320	
Glu	Arg	Arg	His	Pro	Gly	Phe	Glu	Ala	Thr	Phe	Phe	Gln	Leu	Pro	Arg	
				325					330						335	
Met	Ser	Ser	Cys	Gly	Gly	Arg	Leu	Arg	Lys	Ala	Gln	Gly	Thr	Phe	Asn	
			340					345					350			
Ser	Pro	Tyr	Tyr	Pro	Gly	His	Tyr	Pro	Pro	Asn	Ile	Asp	Cys	Thr	Trp	
		355					360					365				
Asn	Ile	Glu	Val	Pro	Asn	Asn	Gln	His	Val	Lys	Val	Arg	Phe	Lys	Phe	
		370				375					380					
Phe	Tyr	Leu	Leu	Glu	Pro	Gly	Val	Pro	Ala	Gly	Thr	Cys	Pro	Lys	Asp	
385					390					395					400	
Tyr	Val	Glu	Ile	Asn	Gly	Glu	Lys	Tyr	Cys	Gly	Glu	Arg	Ser	Gln	Phe	
				405					410					415		
Val	Val	Thr	Ser	Asn	Ser	Asn	Lys	Ile	Thr	Val	Arg	Phe	His	Ser	Asp	
			420					425					430			
Gln	Ser	Tyr	Thr	Asp	Thr	Gly	Phe	Leu	Ala	Glu	Tyr	Leu	Ser	Tyr	Asp	
		435				440						445				
Ser	Ser	Asp	Arg	Cys	Asp	Ala	Gly	His	Gln	Phe	Thr	Cys	Lys	Asn	Lys	
		450				455					460					
Phe	Cys	Lys	Pro	Leu	Phe	Trp	Val	Cys	Asp	Ser	Val	Asn	Asp	Cys	Gly	
465					470					475					480	
Asp	Asn	Ser	Asp	Glu	Gln	Gly	Cys	Met	Asn	Val	Val	Thr	Cys	Thr	Lys	
				485					490					495		
His	Thr	Tyr	Arg	Cys	Leu	Asn	Gly	Leu	Cys	Leu	Ser	Lys	Gly	Asn	Pro	
			500					505					510			
Glu	Cys	Asp	Gly	Lys	Glu	Asp	Cys	Ser	Asp	Gly	Ser	Asp	Glu	Lys	Asp	
		515					520					525				
Cys	Asp	Cys	Gly	Leu	Arg	Ser	Phe	Thr	Arg	Gln	Ala	Arg	Val	Val	Gly	
		530				535					540					
Gly	Thr	Asp	Ala	Asp	Glu	Gly	Glu	Trp	Pro	Trp	Gln	Val	Ser	Leu	His	
545					550					555					560	
Ala	Leu	Gly	Gln	Gly	His	Ile	Cys	Gly	Ala	Ser	Leu	Ile	Ser	Pro	Asn	
				565					570					575		
Trp	Leu	Val	Ser	Ala	Ala	His	Cys	Tyr	Ile	Asp	Asp	Arg	Gly	Phe	Arg	
			580					585</								

325

705		710		715		720
Leu Ser Gly Gly Val Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu						
		725		730		735
Ser Ser Val Glu Ala Asp Gly Arg Ile Phe Gln Ala Gly Val Val Ser						
		740		745		750
Trp Gly Asp Gly Cys Ala Gln Arg Asn Lys Pro Gly Val Tyr Thr Arg						
		755		760		765
Leu Pro Leu Phe Arg Asp Trp Ile Lys Glu Asn Thr Gly Val						
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<210> 313

<211> 2805

<212> DNA

<213> Homo sapiens

<400> 313

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326

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<210> 314

<211> 323

<212> PRT

<213> Homo sapiens

<400> 314

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Asn Cys Thr Cys Pro Thr Asn Lys Met Thr Val Cys Ser Pro Asp Gly
 35          40          45
Pro Gly Gly Arg Cys Gln Cys Arg Ala Leu Gly Ser Gly Met Ala Val
 50          55          60
Asp Cys Ser Thr Leu Thr Ser Lys Cys Leu Leu Leu Lys Ala Arg Met
 65          70          75          80
Ser Ala Pro Lys Asn Ala Arg Thr Leu Val Arg Pro Ser Glu His Ala
 85          90          95
Leu Val Asp Asn Asp Gly Leu Tyr Asp Pro Asp Cys Asp Pro Glu Gly
100          105          110
Arg Phe Lys Ala Arg Gln Cys Asn Gln Thr Ser Val Cys Trp Cys Val
115          120          125
Asn Ser Val Gly Val Arg Arg Thr Asp Lys Gly Asp Leu Ser Leu Arg
130          135          140
Cys Asp Glu Leu Val Arg Thr His His Ile Leu Ile Asp Leu Arg His
145          150          155          160
Arg Pro Thr Ala Gly Ala Phe Asn His Ser Asp Leu Asp Ala Glu Leu
165          170          175
Arg Arg Leu Phe Arg Glu Arg Tyr Arg Leu His Pro Lys Phe Val Ala
180          185          190
Ala Val His Tyr Glu Gln Pro Thr Ile Gln Ile Glu Leu Arg Gln Asn
195          200          205
Thr Ser Gln Lys Ala Ala Gly Glu Val Asp Ile Gly Asp Ala Ala Tyr
210          215          220
Tyr Phe Glu Arg Asp Ile Lys Gly Glu Ser Leu Phe Gln Gly Arg Gly
225          230          235          240
Gly Leu Asp Leu Arg Val Arg Gly Glu Pro Leu Gln Val Glu Arg Thr
245          250          255
Leu Ile Tyr Tyr Leu Asp Glu Ile Pro Pro Lys Phe Ser Met Lys Arg
260          265          270
Leu Thr Ala Gly Leu Ile Ala Val Ile Val Val Val Val Val Ala Leu
275          280          285
Val Ala Gly Met Ala Val Leu Val Ile Thr Asn Arg Arg Lys Ser Gly
290          295          300
Lys Tyr Lys Lys Val Glu Ile Lys Glu Leu Gly Glu Leu Arg Lys Glu
305          310          315          320
Pro Ser Leu

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<210> 315

327

<211> 1142

<212> DNA

<213> Homo sapiens

<400> 315

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<210> 316

<211> 235

<212> PRT

<213> Homo sapiens

<400> 316

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20     25     30
Ala Glu Ile Cys Leu Leu Pro Leu Asp Tyr Gly Pro Cys Arg Ala Leu
35     40     45
Leu Leu Arg Tyr Tyr Tyr Asp Arg Tyr Thr Gln Ser Cys Arg Gln Phe
50     55     60
Leu Tyr Gly Gly Cys Glu Gly Asn Ala Asn Asn Phe Tyr Thr Trp Glu
65     70     75     80
Ala Cys Asp Asp Ala Cys Trp Arg Ile Glu Lys Val Pro Lys Val Cys
85     90     95
Arg Leu Gln Val Ser Val Asp Asp Gln Cys Glu Gly Ser Thr Glu Lys
100    105    110
Tyr Phe Phe Asn Leu Ser Ser Met Thr Cys Glu Lys Phe Phe Ser Gly
115    120    125
Gly Cys His Arg Asn Arg Ile Glu Asn Arg Phe Pro Asp Glu Ala Thr
130    135    140
Cys Met Gly Phe Cys Ala Pro Lys Lys Ile Pro Ser Phe Cys Tyr Ser
145    150    155    160
Pro Lys Asp Glu Gly Leu Cys Ser Ala Asn Val Thr Arg Tyr Tyr Phe
165    170    175
Asn Pro Arg Tyr Arg Thr Cys Asp Ala Phe Thr Tyr Thr Gly Cys Gly
180    185    190
Gly Asn Asp Asn Asn Phe Val Ser Arg Glu Asp Cys Lys Arg Ala Cys
195    200    205

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328

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 Ser Arg Ile Arg Lys Ile Arg Lys Lys Gln Phe
 225 230 235

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<210> 318

329

<211> 428

<212> PRT

<213> Homo sapiens

<400> 318

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Gly Ile Pro Ile Ile Ile Ala Leu Ser Leu Ala Ser Ile Ile Ile
      35           40           45
Val Val Val Leu Ile Lys Val Ile Leu Asp Lys Tyr Tyr Phe Leu Cys
      50           55           60
Gly Gln Pro Leu His Phe Ile Pro Arg Lys Gln Leu Cys Asp Gly Glu
65           70           75           80
Leu Asp Cys Pro Leu Gly Glu Asp Glu Glu His Cys Val Lys Ser Phe
      85           90           95
Pro Glu Gly Pro Ala Val Ala Val Arg Leu Ser Lys Asp Arg Ser Thr
          100          105          110
Leu Gln Val Leu Asp Ser Ala Thr Gly Asn Trp Phe Ser Ala Cys Phe
          115          120          125
Asp Asn Phe Thr Glu Ala Leu Ala Glu Thr Ala Cys Arg Gln Met Gly
          130          135          140
Tyr Ser Ser Lys Pro Thr Phe Arg Ala Val Glu Ile Gly Pro Asp Gln
145          150          155          160
Asp Leu Asp Val Val Glu Ile Thr Glu Asn Ser Gln Glu Leu Arg Met
          165          170          175
Arg Asn Ser Ser Gly Pro Cys Leu Ser Gly Ser Leu Val Ser Leu His
          180          185          190
Cys Leu Ala Cys Gly Lys Ser Leu Lys Thr Pro Arg Val Val Gly Gly
          195          200          205
Glu Glu Ala Ser Val Asp Ser Trp Pro Trp Gln Val Ser Ile Gln Tyr
          210          215          220
Asp Lys Gln His Val Cys Gly Gly Ser Ile Leu Asp Pro His Trp Val
225          230          235          240
Leu Thr Ala Ala His Cys Phe Arg Lys His Thr Asp Val Phe Asn Trp
          245          250          255
Lys Val Arg Ala Gly Ser Asp Lys Leu Gly Ser Phe Pro Ser Leu Ala
          260          265          270
Val Ala Lys Ile Ile Ile Ile Glu Phe Asn Pro Met Tyr Pro Lys Asp
          275          280          285
Asn Asp Ile Ala Leu Met Lys Leu Gln Phe Pro Leu Thr Phe Ser Gly
          290          295          300
Thr Val Arg Pro Ile Cys Leu Pro Phe Phe Asp Glu Glu Leu Thr Pro
305          310          315          320
Ala Thr Pro Leu Trp Ile Ile Gly Trp Gly Phe Thr Lys Gln Asn Gly
          325          330          335
Gly Lys Met Ser Asp Ile Leu Leu Gln Ala Ser Val Gln Val Ile Asp
          340          345          350
Ser Thr Arg Cys Asn Ala Asp Asp Ala Tyr Gln Gly Glu Val Thr Glu
          355          360          365
Lys Met Met Cys Ala Gly Ile Pro Glu Gly Gly Val Asp Thr Cys Gln
          370          375          380
Gly Asp Ser Gly Gly Pro Leu Met Tyr Gln Ser Asp Gln Trp His Val
385          390          395          400
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420

425

<210> 319
 <211> 3529
 <212> DNA
 <213> Homo sapiens

<400> 319

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331

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<210> 320

<211> 444

<212> PRT

<213> Homo sapiens

<400> 320

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Lys Ala Leu Lys Ile Phe Gln Glu Lys His Val Asn Leu Leu His Ile
          35           40           45
Glu Ser Arg Lys Ser Lys Arg Arg Asn Ser Glu Phe Glu Ile Phe Val
 50           55           60
Asp Cys Asp Ile Asn Arg Glu Gln Leu Asn Asp Ile Phe His Leu Leu
65           70           75           80
Lys Ser His Thr Asn Val Leu Ser Val Asn Leu Pro Asp Asn Phe Thr
          85           90           95
Leu Lys Glu Asp Gly Met Glu Thr Val Pro Trp Phe Pro Lys Lys Ile
          100          105          110
Ser Asp Leu Asp His Cys Ala Asn Arg Val Leu Met Tyr Gly Ser Glu
          115          120          125
Leu Asp Ala Asp His Pro Gly Phe Lys Asp Asn Val Tyr Arg Lys Arg
          130          135          140
Arg Lys Tyr Phe Ala Asp Leu Ala Met Asn Tyr Lys His Gly Asp Pro
145          150          155          160
Ile Pro Lys Val Glu Phe Thr Glu Glu Glu Ile Lys Thr Trp Gly Thr
          165          170          175
Val Phe Gln Glu Leu Asn Lys Leu Tyr Pro Thr His Ala Cys Arg Glu
          180          185          190
Tyr Leu Lys Asn Leu Pro Leu Leu Ser Lys Tyr Cys Gly Tyr Arg Glu
          195          200          205
Asp Asn Ile Pro Gln Leu Glu Asp Val Ser Asn Phe Leu Lys Glu Arg
          210          215          220
Thr Gly Phe Ser Ile Arg Pro Val Ala Gly Tyr Leu Ser Pro Arg Asp
225          230          235          240
Phe Leu Ser Gly Leu Ala Phe Arg Val Phe His Cys Thr Gln Tyr Val
          245          250          255
Arg His Ser Ser Asp Pro Phe Tyr Thr Pro Glu Pro Asp Thr Cys His
          260          265          270
Glu Leu Leu Gly His Val Pro Leu Leu Ala Glu Pro Ser Phe Ala Gln
          275          280          285
Phe Ser Gln Glu Ile Gly Leu Ala Ser Leu Gly Ala Ser Glu Glu Ala
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305          310          315          320
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332

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Tyr	Asn	Pro	Tyr	Thr	Arg	Ser	Ile	Gln	Ile	Leu	Lys	Asp	Thr	Lys	Ser
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Ile	Thr	Ser	Ala	Met	Asn	Glu	Leu	Gln	His	Asp	Leu	Asp	Val	Val	Ser
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Asp	Ala	Leu	Ala	Lys	Val	Ser	Arg	Lys	Pro	Ser	Ile				
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<210> 321

<211> 3505

<212> DNA

<213> Homo sapiens

<400> 321

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333

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ccatgTTTggc caggctggtc tcgaacttct gaccgcagggt gatccatccg cctcggcctc 3060
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agtagtaatg acacacccaa atgtaaataa ttattgttag cttttaagtt ggcttccaaa 3300
ttcaaaaaag aaaaaaatcc tgaattctct aaaggaacat atgatagagt ccatatgtta 3360
attcatagga agtgtttaag gtactatggt ctattttggt ctaatctttg ttttactatg 3420
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ttaaaaaaaa aaaaaaaat aaaaaa 3505

```

<210> 322

<211> 466

<212> PRT

<213> Homo sapiens

<400> 322

```

Met Ile Glu Asp Asn Lys Glu Asn Lys Asp His Ser Leu Glu Arg Gly
  1           5           10           15
Arg Ala Ser Leu Ile Phe Ser Leu Lys Asn Glu Val Gly Gly Leu Ile
      20           25           30
Lys Ala Leu Lys Ile Phe Gln Glu Lys His Val Asn Leu Leu His Ile
      35           40           45
Glu Ser Arg Lys Ser Lys Arg Arg Asn Ser Glu Phe Glu Ile Phe Val
      50           55           60
Asp Cys Asp Ile Asn Arg Glu Gln Leu Asn Asp Ile Phe His Leu Leu
      65           70           75           80
Lys Ser His Thr Asn Val Leu Ser Val Asn Leu Pro Asp Asn Phe Thr
      85           90           95
Leu Lys Glu Asp Gly Met Glu Thr Val Pro Trp Phe Pro Lys Lys Ile
      100          105          110
Ser Asp Leu Asp His Cys Ala Asn Arg Val Leu Met Tyr Gly Ser Glu
      115          120          125
Leu Asp Ala Asp His Pro Gly Phe Lys Asp Asn Val Tyr Arg Lys Arg
      130          135          140
Arg Lys Tyr Phe Ala Asp Leu Ala Met Asn Tyr Lys His Gly Asp Pro
      145          150          155          160
Ile Pro Lys Val Glu Phe Thr Glu Glu Glu Ile Lys Thr Trp Gly Thr
      165          170          175
Val Phe Gln Glu Leu Asn Lys Leu Tyr Pro Thr His Ala Cys Arg Glu
      180          185          190
Tyr Leu Lys Asn Leu Pro Leu Leu Ser Lys Tyr Cys Gly Tyr Arg Glu
      195          200          205
Asp Asn Ile Pro Gln Leu Glu Asp Val Ser Asn Phe Leu Lys Glu Arg

```

334

210	215	220
Thr Gly Phe Ser Ile Arg	Pro Val Ala Gly Tyr	Leu Ser Pro Arg Asp
225	230	235
Phe Leu Ser Gly Leu Ala	Phe Arg Val Phe His	Cys Thr Gln Tyr Val
245	250	255
Arg His Ser Ser Asp Pro	Phe Tyr Thr Pro Glu	Pro Asp Thr Cys His
260	265	270
Glu Leu Leu Gly His Val	Pro Leu Leu Ala Glu	Pro Ser Phe Ala Gln
275	280	285
Phe Ser Gln Glu Ile Gly	Leu Ala Ser Leu Gly	Ala Ser Glu Glu Ala
290	295	300
Val Gln Lys Leu Ala Thr	Cys Tyr Phe Phe Thr	Val Glu Phe Gly Leu
305	310	315
Cys Lys Gln Asp Gly Gln	Leu Arg Val Phe Gly	Ala Gly Leu Leu Ser
325	330	335
Ser Ile Ser Glu Leu Lys	His Ala Leu Ser Gly	His Ala Lys Val Lys
340	345	350
Pro Phe Asp Pro Lys Ile	Thr Cys Lys Gln Glu	Cys Leu Ile Thr Thr
355	360	365
Phe Gln Asp Val Tyr Phe	Val Ser Glu Ser Phe	Glu Asp Ala Lys Glu
370	375	380
Lys Met Arg Glu Phe Thr	Lys Thr Ile Lys Arg	Pro Phe Gly Val Lys
385	390	395
Tyr Asn Pro Tyr Thr Arg	Ser Ile Gln Ile Leu	Lys Asp Thr Lys Ser
405	410	415
Ile Thr Ser Ala Met Asn	Glu Leu Gln His Asp	Leu Asp Val Val Ser
420	425	430
Asp Ala Leu Ala Lys Ser	Leu Asn Glu Asp Val	Leu Gln Val Ser Val
435	440	445
Phe Ala Leu Leu Leu Phe	Leu Pro Ser Leu His	Gly Glu Cys His Pro
450	455	460
Asp Thr		
465		

<210> 323

<211> 1154

<212> DNA

<213> Homo sapiens

<400> 323

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accatgcagt gcttcagctt cattaagacc atgatgatcc tcttcaattt gctcatcttt 180
ctgtgtggtg cagccctggt ggcagtgggc atctgggtgt caatcgatgg ggcatacctt 240
ctgaagatct tcgggccact gtcgtccagt gccatgcagt ttgtcaacgt gggctacttc 300
ctcatgcag cggcggttgt ggtctttgct cttgggtttcc tgggctgcta tgggtgctaag 360
actgagagca agtgtgccct cgtgacgttc ttcttcatcc tctcctcat cttcattgct 420
gaggttgcag ctgctgtggt cgccttggtg tacaccacaa tggctgagca cttcctgacg 480
ttgctggtag tgctgccat caagaaagat tatggttccc aggaagactt cactcaagtg 540
tggaacacca ccattgaaag gctcaagtgc tgtggcttca ccaactatac ggattttgag 600
gactcaccct acctcaaaga gaacagtgcc ttcccccat tctgttgcaa tgacaacgtc 660
accaaacacag ccaatgaaac ctgcaccaag caaaaggctc acgaccaaaa agtagagggt 720
tgcttcaatc agcttttgta tgacatccga actaatgcag tcaccgtggg tgggtgtggca 780
gctggaattg ggggcctcga gttcttttcc aactcagctc gaaggccacc tcttccagaa 840
agcctctata gcactcccat cagaagagat cagctcttcc tacaaccctc ccctccatga 900
ctttcatggc tcttagagcc tctgctgtct ctgcttcatc ctggaagtat cacaatcctc 960
caccacactg aaccctcaa ggtagggccca ggtctgatta ctttcaggtc cccagtgcc 1020

```


335

```

agcacaaggc tgaggccaaa aaaaggacca ggggatgggt ataaaataaa tcaatgaatt 1080
gactgcctaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa gaaaaaaaaa 1140
aaaaaaaaaa aagt                                     1154

```

<210> 324
 <211> 258
 <212> PRT
 <213> Homo sapiens

<400> 324

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Leu	Ile	Phe	Leu	Cys	Gly	Ala	Ala	Leu	Leu	Ala	Val	Gly	Ile	Trp	Val
			20					25					30		
Ser	Ile	Asp	Gly	Ala	Ser	Phe	Leu	Lys	Ile	Phe	Gly	Pro	Leu	Ser	Ser
		35					40					45			
Ser	Ala	Met	Gln	Phe	Val	Asn	Val	Gly	Tyr	Phe	Leu	Ile	Ala	Ala	Gly
	50					55					60				
Val	Val	Val	Phe	Ala	Leu	Gly	Phe	Leu	Gly	Cys	Tyr	Gly	Ala	Lys	Thr
65					70					75				80	
Glu	Ser	Lys	Cys	Ala	Leu	Val	Thr	Phe	Phe	Phe	Ile	Leu	Leu	Leu	Ile
				85					90					95	
Phe	Ile	Ala	Glu	Val	Ala	Ala	Ala	Val	Val	Ala	Leu	Val	Tyr	Thr	Thr
			100					105					110		
Met	Ala	Glu	His	Phe	Leu	Thr	Leu	Leu	Val	Val	Pro	Ala	Ile	Lys	Lys
		115					120					125			
Asp	Tyr	Gly	Ser	Gln	Glu	Asp	Phe	Thr	Gln	Val	Trp	Asn	Thr	Thr	Met
		130				135						140			
Lys	Gly	Leu	Lys	Cys	Cys	Gly	Phe	Thr	Asn	Tyr	Thr	Asp	Phe	Glu	Asp
145					150					155				160	
Ser	Pro	Tyr	Phe	Lys	Glu	Asn	Ser	Ala	Phe	Pro	Pro	Phe	Cys	Cys	Asn
				165				170					175		
Asp	Asn	Val	Thr	Asn	Thr	Ala	Asn	Glu	Thr	Cys	Thr	Lys	Gln	Lys	Ala
		180						185					190		
His	Asp	Gln	Lys	Val	Glu	Gly	Cys	Phe	Asn	Gln	Leu	Leu	Tyr	Asp	Ile
		195					200					205			
Arg	Thr	Asn	Ala	Val	Thr	Val	Gly	Gly	Val	Ala	Ala	Gly	Ile	Gly	Gly
	210					215					220				
Leu	Glu	Phe	Phe	Ser	Asn	Ser	Ala	Arg	Arg	Pro	Pro	Leu	Pro	Glu	Ser
225					230					235				240	
Leu	Tyr	Ser	Thr	Pro	Ile	Arg	Arg	Asp	His	Val	Phe	Leu	Gln	Pro	Ser
				245				250					255		

Pro Pro

<210> 325
 <211> 1076
 <212> DNA
 <213> Homo sapiens

<400> 325

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aagatcttgc ggccactgtc gtccagtgc atgcagtttg tcaacgtggg ctacttcctc 180
atcgagccgc gcgttgtggt ctttgctctt ggtttcctgg gctgctatgg tgctaagact 240
gagagcaagt gtgcctcgt gacgttcttc ttcatoctcc tcctcatctt cattgctgag 300
gttgacgctg ctgtggtcgc cttggtgtac accacaatgg ctgagcactt cctgacgttg 360

```

336

```

ctggtagtgc ctgccatcaa gaaagattat ggttcccagg aagacttcac tcaagtgtgg 420
aacaccacca tgaaggggct caagtgcgtgt ggcttcacca actatacggg ttttgaggac 480
tcacctact tcaaagagaa cagtgccttt ccccatctct gttgcaatga caacgtcacc 540
aacacagcca atgaaacctg caccgagcaa aaggctcacg accaaaaagt agagggttgc 600
ttcaatcagc ttttgtatga catccgaact aatgcagtca ccgtgggtgg tgtggcagct 660
ggaattgggg gcctcgagct ggctgccatg atttgttcca tgtatctgta ctgcaatcta 720
caataagtcc acttctgcct ctgccactac tgctgccaca tgggaactgt gaagaggcac 780
cctggcaagc agcagtgtt gggggagggg acaggatcta acaatgtcac ttggggcaga 840
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```

<210> 326

<211> 241

<212> PRT

<213> Homo sapiens

<400> 326

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Met Gln Cys Phe Ser Phe Ile Lys Thr Met Met Ile Leu Phe Asn Leu
 1           5           10          15
Leu Ile Phe Leu Cys Gly Ala Ala Leu Leu Ala Val Gly Ile Trp Val
          20          25          30
Ser Ile Asp Gly Ala Ser Phe Leu Lys Ile Phe Gly Pro Leu Ser Ser
          35          40          45
Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu Ile Ala Ala Gly
          50          55          60
Val Val Val Phe Ala Leu Gly Phe Leu Gly Cys Tyr Gly Ala Lys Thr
        65          70          75          80
Glu Ser Lys Cys Ala Leu Val Thr Phe Phe Phe Ile Leu Leu Leu Ile
          85          90          95
Phe Ile Ala Glu Val Ala Ala Ala Val Val Ala Leu Val Tyr Thr Thr
          100         105         110
Met Ala Glu His Phe Leu Thr Leu Leu Val Val Pro Ala Ile Lys Lys
          115         120         125
Asp Tyr Gly Ser Gln Glu Asp Phe Thr Gln Val Trp Asn Thr Thr Met
          130         135         140
Lys Gly Leu Lys Cys Cys Gly Phe Thr Asn Tyr Thr Asp Phe Glu Asp
          145         150         155         160
Ser Pro Tyr Phe Lys Glu Asn Ser Ala Phe Pro Pro Phe Cys Cys Asn
          165         170         175
Asp Asn Val Thr Asn Thr Ala Asn Glu Thr Cys Thr Glu Gln Lys Ala
          180         185         190
His Asp Gln Lys Val Glu Gly Cys Phe Asn Gln Leu Leu Tyr Asp Ile
          195         200         205
Arg Thr Asn Ala Val Thr Val Gly Gly Val Ala Ala Gly Ile Gly Gly
          210         215         220
Leu Glu Leu Ala Ala Met Ile Val Ser Met Tyr Leu Tyr Cys Asn Leu
          225         230         235         240
Gln

```

<210> 327

<211> 2244

<212> DNA

<213> Homo sapiens

<400> 327

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gggaaggaga tgcctcttcc ttcccttcaa tagtgggtta aaccagctg gcaccctctg 60
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ttctcaggat ctcaacaagg aagagcagac caagggttgc tctgattcct tacaaccttc 180
cgtaattcca ggcttgtggc cccaaattca gggccccacc ctccaggaa caaatcatta 240
tagtaataat ttgccttcat ctcccatata ccaactaagc atgtttaact acgaacgtcc 300
aaaacacttc atccagtcctc aaaacccatg tggctccaga ttgcagcctc ctggaccaga 360
aacctccagc ttctctagcc agaccaaaaca gtcttccatt atcatccagc cccgccagt 420
tacagagcaa agattttctg cctcctcaac actgagctct cacatcacca tgtctctctc 480
tgctttccct gcttctcccc agcagcatgc tggctccaac ccaggccaaa gggttacaac 540
cacctataac cagtccccag ccagcttccct cagctccata ttaccatcac agcctgatta 600
caatagcagt aaaatccctt ccgctatgga ttccaactat caacagtcct cagctggcca 660
acctataaat gcaaagccat cccaaactgc aaatgctaag ccataccaa gaactcctga 720
tcatgaaata caaggatcaa aagaagcttt gattcaagat ttggaagaa agctgaaatg 780
caaggacacc cttcttcata atggaaatca acgtctaaca tatgaagaga agatggctcg 840
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tattaacaya ttatggtttt aattaggtaa tatagttaat atatatattt aatattattt 1920
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gcttgaata acgtttactg gtactgcttt ctaataactg ttttaccgt tttctcttgt 2160
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aaaattcaaa tatttaaac ggac 2244

```

<210> 328

<211> 498

<212> PRT

<213> Homo sapiens

<400> 328

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Met Phe Asn Tyr Glu Arg Pro Lys His Phe Ile Gln Ser Gln Asn Pro
1           5           10          15
Cys Gly Ser Arg Leu Gln Pro Pro Gly Pro Glu Thr Ser Ser Phe Ser
20          25          30
Ser Gln Thr Lys Gln Ser Ser Ile Ile Gln Pro Arg Gln Cys Thr
35          40          45
Glu Gln Arg Phe Ser Ala Ser Ser Thr Leu Ser Ser His Ile Thr Met
50          55          60
Ser Ser Ser Ala Phe Pro Ala Ser Pro Gln Gln His Ala Gly Ser Asn
65          70          75          80
Pro Gly Gln Arg Val Thr Thr Thr Tyr Asn Gln Ser Pro Ala Ser Phe
85          90          95

```

338

Leu Ser Ser Ile Leu Pro Ser Gln Pro Asp Tyr Asn Ser Ser Lys Ile
 100 105 110
 Pro Ser Ala Met Asp Ser Asn Tyr Gln Gln Ser Ser Ala Gly Gln Pro
 115 120 125
 Ile Asn Ala Lys Pro Ser Gln Thr Ala Asn Ala Lys Pro Ile Pro Arg
 130 135 140
 Thr Pro Asp His Glu Ile Gln Gly Ser Lys Glu Ala Leu Ile Gln Asp
 145 150 155 160
 Leu Glu Arg Lys Leu Lys Cys Lys Asp Thr Leu Leu His Asn Gly Asn
 165 170 175
 Gln Arg Leu Thr Tyr Glu Glu Lys Met Ala Arg Arg Leu Leu Gly Pro
 180 185 190
 Gln Asn Ala Ala Ala Val Phe Gln Ala Gln Asp Asp Ser Gly Ala Gln
 195 200 205
 Asp Ser Gln Gln His Asn Ser Glu His Ala Arg Leu Gln Val Pro Thr
 210 215 220
 Ser Gln Val Arg Ser Arg Ser Thr Ser Arg Gly Asp Val Asn Asp Gln
 225 230 235 240
 Asp Ala Ile Gln Glu Lys Phe Tyr Pro Pro Arg Phe Ile Gln Val Pro
 245 250 255
 Glu Asn Met Ser Ile Asp Glu Gly Arg Phe Cys Arg Met Asp Phe Lys
 260 265 270
 Val Ser Gly Leu Pro Ala Pro Asp Val Ser Trp Tyr Leu Asn Gly Arg
 275 280 285
 Thr Val Gln Ser Asp Asp Leu His Lys Met Ile Val Ser Glu Lys Gly
 290 295 300
 Leu His Ser Leu Ile Phe Glu Val Val Arg Ala Ser Asp Ala Gly Ala
 305 310 315 320
 Tyr Ala Cys Val Ala Lys Asn Arg Ala Gly Glu Ala Thr Phe Thr Val
 325 330 335
 Gln Leu Asp Val Leu Ala Lys Glu His Lys Arg Ala Pro Met Phe Ile
 340 345 350
 Tyr Lys Pro Gln Ser Lys Lys Val Leu Glu Gly Asp Ser Val Lys Leu
 355 360 365
 Glu Cys Gln Ile Ser Ala Ile Pro Pro Pro Lys Leu Phe Trp Lys Arg
 370 375 380
 Asn Asn Glu Met Val Gln Phe Asn Thr Asp Arg Ile Ser Leu Tyr Gln
 385 390 395 400
 Asp Asn Thr Gly Arg Val Thr Leu Leu Ile Lys Asp Val Asn Lys Lys
 405 410 415
 Asp Ala Gly Trp Tyr Thr Val Ser Ala Val Asn Glu Ala Gly Val Thr
 420 425 430
 Thr Cys Asn Thr Arg Leu Asp Val Thr Ala Arg Pro Asn Gln Thr Leu
 435 440 445
 Pro Ala Pro Lys Gln Leu Arg Val Arg Pro Thr Phe Ser Lys Tyr Leu
 450 455 460
 Ala Leu Asn Gly Lys Gly Leu Asn Val Lys Gln Ala Phe Asn Pro Glu
 465 470 475 480
 Gly Glu Phe Gln Arg Leu Ala Ala Gln Ser Gly Leu Tyr Glu Ser Glu
 485 490 495
 Glu Leu

<210> 329

<211> 3649

<212> DNA

<213> Homo sapiens

<400> 329

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cctcctgccc tcaggatccc agagggcctg gccaggggcc tgggcagccg gctcgagagg 2760
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aactgtaggc agctcatgtt gagaatgggt ttccaggaaa ccggttgtct tgtaatctct 3060
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cgtgtcaaat actgtcaatg gcttttccct tttctttctt ttttttttaa attgtggact 3360

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340

taaagaaaaa tatitttattt ttaatgcttt tctgggataa gcattaaaga tgccaaaaag 3420
 aaaaaaaaac aaaagaatga tagtgatggt aaggcaagat tctagcaaag agagatggga 3480
 gataaatggc tgagagttca ggtgaatatt taatatatta aaaattgtat taaagttttt 3540
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<210> 330

<211> 812

<212> PRT

<213> Homo sapiens

<400> 330

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			20					25					30		
Leu	Asn	Thr	Ile	Ala	Glu	Gly	Asp	Asn	Val	Tyr	Ala	Phe	Gln	Val	Pro
			35				40					45			
Pro	Ser	Pro	Ser	Gln	Gly	Thr	Leu	Ser	Ala	His	Pro	Leu	Gly	Leu	Ser
			50			55					60				
Ala	Ser	Pro	Arg	Leu	Ala	Ala	Arg	Glu	Gly	Gln	Arg	Phe	Ser	Leu	Ser
65					70					75				80	
Leu	His	Ser	Glu	Ser	Lys	Val	Leu	Ile	Leu	Phe	Cys	Asn	Leu	Val	Gly
				85					90					95	
Ser	Gly	Gln	Gln	Ala	Ser	Arg	Phe	Gly	Pro	Pro	Phe	Leu	Ile	Arg	Glu
			100					105						110	
Asp	Arg	Ala	Val	Ser	Trp	Ala	Gln	Leu	Gln	Gln	Ser	Ile	Leu	Ser	Lys
			115				120						125		
Val	Arg	His	Leu	Met	Lys	Ser	Glu	Ala	Pro	Val	Gln	Asn	Leu	Gly	Ser
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Leu	Phe	Ser	Ile	Arg	Val	Val	Gly	Leu	Ser	Val	Ala	Cys	Ser	Tyr	Leu
145					150					155				160	
Ser	Pro	Lys	Asp	Ser	Arg	Pro	Leu	Cys	His	Trp	Ala	Val	Asp	Arg	Val
				165					170					175	
Leu	His	Leu	Arg	Arg	Pro	Gly	Gly	Pro	Pro	His	Val	Lys	Leu	Ala	Val
			180					185						190	
Glu	Trp	Asp	Ser	Ser	Val	Lys	Glu	Arg	Leu	Phe	Gly	Ser	Leu	Gln	Glu
			195				200						205		
Glu	Arg	Ala	Gln	Asp	Ala	Asp	Ser	Val	Trp	Gln	Gln	Gln	Gln	Ala	His
			210			215							220		
Gln	Gln	His	Ser	Cys	Thr	Leu	Asp	Glu	Cys	Phe	Gln	Phe	Tyr	Thr	Lys
225					230					235				240	
Glu	Glu	Gln	Leu	Ala	Gln	Asp	Asp	Ala	Trp	Lys	Cys	Pro	His	Cys	Gln
			245						250					255	
Val	Leu	Gln	Gln	Gly	Met	Val	Lys	Leu	Ser	Leu	Trp	Thr	Leu	Pro	Asp
			260					265						270	
Ile	Leu	Ile	Ile	His	Leu	Lys	Arg	Phe	Cys	Gln	Val	Gly	Glu	Arg	Arg
			275				280						285		
Asn	Lys	Leu	Ser	Thr	Leu	Val	Lys	Phe	Pro	Leu	Ser	Gly	Leu	Asn	Met
			290			295						300			
Ala	Pro	His	Val	Ala	Gln	Arg	Ser	Thr	Ser	Pro	Glu	Ala	Gly	Leu	Gly
305					310					315				320	
Pro	Trp	Pro	Ser	Trp	Lys	Gln	Pro	Asp	Cys	Leu	Pro	Thr	Ser	Tyr	Pro
				325					330					335	
Leu	Asp	Phe	Leu	Tyr	Asp	Leu	Tyr	Ala	Val	Cys	Asn	His	His	Gly	Asn
			340					345					350		
Leu	Gln	Gly	Gly	His	Tyr	Thr	Ala	Tyr	Cys	Arg	Asn	Ser	Leu	Asp	Gly
			355				360						365		

341

Gln	Trp	Tyr	Ser	Tyr	Asp	Asp	Ser	Thr	Val	Glu	Pro	Leu	Arg	Glu	Asp	370	375	380
Glu	Val	Asn	Thr	Arg	Gly	Ala	Tyr	Ile	Leu	Phe	Tyr	Gln	Lys	Arg	Asn	385	390	395
Ser	Ile	Pro	Pro	Trp	Ser	Ala	Ser	Ser	Ser	Met	Arg	Gly	Ser	Thr	Ser	405	410	415
Ser	Ser	Leu	Ser	Asp	His	Trp	Leu	Leu	Arg	Leu	Gly	Ser	His	Ala	Gly	420	425	430
Ser	Thr	Arg	Gly	Ser	Leu	Leu	Ser	Trp	Ser	Ser	Ala	Pro	Cys	Pro	Ser	435	440	445
Leu	Pro	Gln	Val	Pro	Asp	Ser	Pro	Ile	Phe	Thr	Asn	Ser	Leu	Cys	Asn	450	455	460
Gln	Glu	Lys	Gly	Gly	Leu	Glu	Pro	Arg	Arg	Leu	Val	Arg	Gly	Val	Lys	465	470	475
Gly	Arg	Ser	Ile	Ser	Met	Lys	Ala	Pro	Thr	Thr	Ser	Arg	Ala	Lys	Gln	485	490	495
Gly	Pro	Phe	Lys	Thr	Met	Pro	Leu	Arg	Trp	Ser	Phe	Gly	Ser	Lys	Glu	500	505	510
Lys	Pro	Pro	Gly	Ala	Ser	Val	Glu	Leu	Val	Glu	Tyr	Leu	Glu	Ser	Arg	515	520	525
Arg	Arg	Pro	Arg	Ser	Thr	Ser	Gln	Ser	Ile	Val	Ser	Leu	Leu	Thr	Gly	530	535	540
Thr	Ala	Gly	Glu	Asp	Glu	Lys	Ser	Ala	Ser	Pro	Arg	Ser	Asn	Val	Ala	545	550	555
Leu	Pro	Ala	Asn	Ser	Glu	Asp	Gly	Gly	Arg	Ala	Ile	Glu	Arg	Gly	Pro	565	570	575
Ala	Gly	Val	Pro	Cys	Pro	Ser	Ala	Gln	Pro	Asn	His	Cys	Leu	Ala	Pro	580	585	590
Gly	Asn	Ser	Asp	Gly	Pro	Asn	Thr	Ala	Arg	Lys	Leu	Lys	Glu	Asn	Ala	595	600	605
Gly	Gln	Asp	Ile	Lys	Leu	Pro	Arg	Lys	Phe	Asp	Leu	Pro	Leu	Thr	Val	610	615	620
Met	Pro	Ser	Val	Glu	His	Glu	Lys	Pro	Ala	Arg	Pro	Glu	Gly	Gln	Lys	625	630	635
Ala	Met	Asn	Trp	Lys	Glu	Ser	Phe	Gln	Met	Gly	Ser	Lys	Ser	Ser	Pro	645	650	655
Pro	Ser	Pro	Tyr	Met	Gly	Phe	Ser	Gly	Asn	Ser	Lys	Asp	Ser	Arg	Arg	660	665	670
Gly	Thr	Ser	Glu	Leu	Asp	Arg	Pro	Leu	Gln	Gly	Thr	Leu	Thr	Leu	Leu	675	680	685
Arg	Ser	Val	Phe	Arg	Lys	Lys	Glu	Asn	Arg	Arg	Asn	Glu	Arg	Ala	Glu	690	695	700
Val	Ser	Pro	Gln	Val	Pro	Pro	Val	Ser	Leu	Val	Ser	Gly	Gly	Leu	Ser	705	710	715
Pro	Ala	Met	Asp	Gly	Gln	Ala	Pro	Gly	Ser	Pro	Pro	Ala	Leu	Arg	Ile	725	730	735
Pro	Glu	Gly	Leu	Ala	Arg	Gly	Leu	Gly	Ser	Arg	Leu	Glu	Arg	Asp	Val	740	745	750
Trp	Ser	Ala	Pro	Ser	Ser	Leu	Arg	Leu	Pro	Arg	Lys	Ala	Ser	Arg	Ala	755	760	765
Pro	Arg	Gly	Ser	Ala	Leu	Gly	Met	Ser	Gln	Arg	Thr	Val	Pro	Gly	Glu	770	775	780
Gln	Ala	Ser	Tyr	Gly	Thr	Phe	Gln	Arg	Val	Lys	Tyr	His	Thr	Leu	Ser	785	790	795
Leu	Gly	Arg	Lys	Lys	Thr	Leu	Pro	Glu	Ser	Ser	Phe					805	810	

342

<210> 331
 <211> 1811
 <212> DNA
 <213> Homo sapiens

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 tattctggct ggagcaattg cactcatcat tggcttttgg atttcaggga gacactccat 180
 cacagtcact actgtcgccct cagctgggaa cattggggag gatggaatcc agagctgcac 240
 ttttgaacct gacatcaaac tttctgatat cgtgatacaa tggctgaagg aaggtgtttt 300
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 cagaggccgg acagcagtgt ttgctgatca agtgatagtt ggcaatgcct ctttgcggct 420
 gaaaaacgtg caactcacag atgctggcac ctacaaatgt tatacatca cttctaaagg 480
 caaggggaat gctaaccttg agtataaaac tggagccctc agcatgccgg aagtgaatgt 540
 ggactataat gccagctcag agaccttgcg gtgtgaggct ccccgatggt tccccagcc 600
 cacagtggtc tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac 660
 cagcttttgag ctgaactctg agaatgtgac catgaagggt gtgtctgtgc tctacaatgt 720
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 gttaccact gccttcttg accttgagc cagggtgact gtattacatg ttgttataga 1740
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 aaaaaaaaaa a 1811

<210> 332
 <211> 282
 <212> PRT
 <213> Homo sapiens

<400> 332
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 20 25 30
 Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile
 35 40 45
 Gly Glu Asp Gly Ile Gln Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu
 50 55 60
 Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val
 65 70 75 80
 His Glu Phe Lys Glu Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met
 85 90 95
 Phe Arg Gly Arg Thr Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn
 100 105 110

343

Ala Ser Leu Arg Leu Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr
 115 120 125
 Lys Cys Tyr Ile Ile Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu
 130 135 140
 Tyr Lys Thr Gly Ala Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn
 145 150 155 160
 Ala Ser Ser Glu Thr Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln
 165 170 175
 Pro Thr Val Val Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser
 180 185 190
 Glu Val Ser Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met
 195 200 205
 Lys Val Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser
 210 215 220
 Cys Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val
 225 230 235 240
 Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser
 245 250 255
 Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp Ala Leu
 260 265 270
 Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys
 275 280

<210> 333

<211> 1984

<212> DNA

<213> Homo sapiens

<400> 333

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 aggaagctgg atacttctgg gttttcatcg atcttagtga cattgaccaa ggcagcagtg 180
 gctctgaaaa tgggagatct tgacatgcac agaaatgaaa tgaaaagcca ttcagagatg 240
 aagttgggtat gtggcttcat tctggaacct cggctgttga ttcaacagag aaagggacag 300
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 cttaaagcca ctcgaaacat tgtcaattgt tgctgtggaa ctagaactga aggatttcat 1140
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 tgaaagaatg tcactaaactg gtccagaatt ttatcttctt gattttttcca gatttctcta 1680

344

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tagaagttta caaagctaac tttcttcttg totagctatt aacatgattt gtcaaatgca 1860
tgtttttttc agccaaagcc ttgtttccat tttgttgat gtgtactctt gctcttttag 1920
ctagagtgtg tgtgaaaata aagaaataca tcattgtatt cacaaaaaaa aaaaaaaaaa 1980
aaaa                                             1984

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<210> 334

<211> 258

<212> PRT

<213> Homo sapiens

<400> 334

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      20             25             30
Lys Leu Asp Thr Ser Gly Phe Ser Ile Leu Val Thr Leu Thr Lys
      35             40             45
Ala Ala Val Ala Leu Lys Met Gly Asp Leu Asp Met His Arg Asn Glu
      50             55             60
Met Lys Ser His Ser Glu Met Lys Leu Val Cys Gly Phe Ile Leu Glu
      65             70             75             80
Pro Arg Leu Leu Ile Gln Gln Arg Lys Gly Gln Ile Val Pro Thr Glu
      85             90             95
Leu Ala Leu His Leu Lys Glu Thr Gln Pro Gly Leu Leu Val Ala Ser
      100            105            110
Val Leu Gly Leu Gln Lys Asn Asn Lys Ile Gly Ile Glu Glu Ala Asp
      115            120            125
Ser Phe Phe Lys Val Leu Cys Ala Lys Asp Glu Asp Thr Ile Pro Gln
      130            135            140
Leu Leu Val Asp Phe Trp Glu Ala Gln Leu Val Ala Cys Leu Pro Asp
      145            150            155            160
Val Val Leu Gln Glu Leu Phe Phe Lys Leu Thr Ser Gln Tyr Ile Trp
      165            170            175
Arg Leu Ser Lys Arg Gln Pro Pro Asp Thr Thr Pro Leu Arg Thr Ser
      180            185            190
Glu Asp Leu Ile Asn Ala Cys Ser His Tyr Gly Leu Ile Tyr Pro Trp
      195            200            205
Val His Val Val Ile Ser Ser Asp Ser Leu Ala Asp Lys Asn Tyr Thr
      210            215            220
Glu Asp Leu Ser Lys Leu Gln Leu Pro Leu Phe Arg Ser Trp Ser His
      225            230            235            240
Phe Gln Lys Thr Leu Leu Pro Ala Ser Val Ser Met Phe Cys Val Val
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His Ala

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<210> 335

<211> 2180

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(2180)

<223> n = A,T,C or G

<400> 335

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cgggctcagg tctgtcggct tcccagcgtc gggcgagcgt gcgtcggaga aagctgctca 180
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ttaaaccacc tgagtgcagt agtgatgtca acccttgagc cggcgagcgg aacagagggg 480
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<210> 336

<211> 234

<212> PRT

<213> Homo sapiens

<400> 336

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      20            25            30
Arg Arg Lys Leu Leu Met Asn Ser Glu Gln Arg Ile Asn Arg Ile Met
      35            40            45
Gly Phe His Arg Pro Gly Ser Gly Ala Glu Glu Glu Ser Gln Thr Lys
      50            55            60
Ser Lys Gln Gln Asp Ser Asp Lys Leu Asn Ser Leu Ser Val Pro Ser
      65            70            75            80
Val Ser Lys Arg Val Val Leu Gly Asp Ser Val Ser Thr Gly Thr Thr
      85            90            95

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346

Asp Gln Gln Gly Gly Val Ala Glu Val Lys Gly Thr Gln Leu Gly Asp
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 Lys Leu Asp Ser Phe Ile Lys Pro Pro Glu Cys Ser Ser Asp Val Asn
 115 120 125
 Leu Glu Leu Arg Gln Arg Asn Arg Gly Asp Leu Thr Ala Asp Ser Val
 130 135 140
 Gln Arg Gly Ser Arg His Gly Leu Glu Gln Tyr Leu Ser Arg Phe Glu
 145 150 155 160
 Glu Ala Met Lys Leu Arg Lys Gln Leu Ile Ser Glu Lys Pro Ser Gln
 165 170 175
 Glu Asp Gly Asn Thr Thr Glu Glu Phe Asp Ser Phe Arg Ile Phe Arg
 180 185 190
 Leu Val Gly Cys Ala Leu Leu Ala Leu Gly Val Arg Ala Phe Val Cys
 195 200 205
 Lys Tyr Leu Ser Ile Phe Ala Pro Phe Leu Thr Leu Gln Leu Ala Leu
 210 215 220
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<210> 337

<211> 3695

<212> DNA

<213> Homo sapiens

<400> 337

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<210> 338

<211> 353

<212> PRT

<213> Homo sapiens

<400> 338

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Val Leu Cys Val Gly Thr Phe Phe Cys Leu Phe Ile Phe Phe Ser Asn
      35             40             45
Ser Leu Val Ile Ala Ala Val Ile Lys Asn Arg Lys Phe His Phe Pro
      50             55             60
Phe Tyr Tyr Leu Leu Ala Asn Leu Ala Ala Ala Asp Phe Phe Ala Gly
65             70             75             80
Ile Ala Tyr Val Phe Leu Met Phe Asn Thr Gly Pro Val Ser Lys Thr
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Leu Thr Ala Ser Leu Thr Asn Leu Leu Val Ile Ala Val Glu Arg His
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349

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<210> 340

<211> 784

<212> PRT

<213> Homo sapiens

<400> 340

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      35             40             45
Leu Val Pro Ala Ala Glu Ile Arg Ala Val Arg Glu Glu Ser Pro Ser
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Asn Leu Ala Thr Leu Cys Tyr Lys Ala Val Glu Lys Leu Val Gln Gly
      65             70             75             80
Ala Glu Ser Gly Cys His Ser Glu Lys Glu Lys Gln Ile Val Leu Asn
      85             90             95
Cys Ser Arg Leu Leu Thr Arg Val Leu Pro Tyr Ile Phe Glu Asp Pro
      100            105            110
Asp Trp Arg Gly Phe Phe Trp Ser Thr Val Pro Gly Ala Gly Arg Gly
      115            120            125
Gly Gln Gly Glu Glu Asp Asp Glu His Ala Arg Pro Leu Ala Glu Ser
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Leu Leu Leu Ala Ile Ala Asp Leu Leu Phe Cys Pro Asp Thr Gln Ser
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350

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		195					200					205					
Leu	Leu	Thr	Cys	Phe	Ser	Glu	Ala	Met	Tyr	Leu	Pro	Pro	Ala	Pro	Glu		
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Ser	Gly	Ser	Thr	Asn	Pro	Trp	Val	Gln	Phe	Phe	Cys	Ser	Thr	Glu	Asn		
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Arg	His	Ala	Leu	Pro	Leu	Phe	Thr	Ser	Leu	Leu	Asn	Thr	Val	Cys	Ala		
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351

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 645 650 655
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 660 665 670
 Gln Trp Ser Pro Thr Pro Glu Trp Val Leu Ser Trp Lys Ser Lys Leu
 675 680 685
 Pro Leu Gln Thr Ile Met Arg Leu Leu Gln Val Leu Val Pro Gln Val
 690 695 700
 Glu Lys Ile Cys Ile Asp Lys Gly Leu Thr Asp Glu Ser Glu Ile Leu
 705 710 715 720
 Arg Phe Leu Gln His Gly Thr Leu Val Gly Leu Leu Pro Val Pro His
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 Pro Ile Leu Ile Arg Lys Tyr Gln Ala Asn Ser Gly Thr Ala Met Trp
 740 745 750
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<211> 3307

<212> DNA

<213> Homo sapiens

<400> 341

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```

<210> 342

<211> 788

<212> PRT

<213> Homo sapiens

<400> 342

```

Met Gly Ser Thr Asp Ser Lys Leu Asn Phe Arg Lys Ala Val Ile Gln
1          5          10          15
Leu Thr Thr Lys Thr Gln Pro Val Glu Ala Thr Asp Asp Ala Phe Trp
20          25          30
Asp Gln Phe Trp Ala Asp Thr Ala Thr Ser Val Gln Asp Val Phe Ala
35          40          45
Leu Val Pro Ala Ala Glu Ile Arg Ala Val Arg Glu Glu Ser Pro Ser
50          55          60
Asn Leu Ala Thr Leu Cys Tyr Lys Ala Val Glu Lys Leu Val Gln Gly
65          70          75          80
Ala Glu Ser Gly Cys His Ser Glu Lys Glu Lys Gln Ile Val Leu Asn
85          90          95
Cys Ser Arg Leu Leu Thr Arg Val Leu Pro Tyr Ile Phe Glu Asp Pro
100         105         110
Asp Trp Arg Gly Phe Phe Trp Ser Thr Val Pro Gly Ala Gly Arg Gly
115         120         125
Gly Gln Gly Glu Glu Asp Asp Glu His Ala Arg Pro Leu Ala Glu Ser
130         135         140
Leu Leu Leu Ala Ile Ala Asp Leu Leu Phe Cys Pro Asp Phe Thr Val
145         150         155         160
Gln Ser His Arg Arg Ser Thr Val Asp Ser Ala Glu Asp Val His Ser
165         170         175
Leu Asp Ser Cys Glu Tyr Ile Trp Glu Ala Gly Val Gly Phe Ala His
180         185         190
Ser Pro Gln Pro Asn Tyr Ile His Asp Met Asn Arg Met Glu Leu Leu

```

353

	195					200				205					
Lys	Leu	Leu	Leu	Thr	Cys	Phe	Ser	Glu	Ala	Met	Tyr	Leu	Pro	Pro	Ala
	210					215					220				
Pro	Glu	Ser	Gly	Ser	Thr	Asn	Pro	Trp	Val	Gln	Phe	Phe	Cys	Ser	Thr
225					230					235					240
Glu	Asn	Arg	His	Ala	Leu	Pro	Leu	Phe	Thr	Ser	Leu	Leu	Asn	Thr	Val
				245					250						255
Cys	Ala	Tyr	Asp	Pro	Val	Gly	Tyr	Gly	Ile	Pro	Tyr	Asn	His	Leu	Leu
			260					265					270		
Phe	Ser	Asp	Tyr	Arg	Glu	Pro	Leu	Val	Glu	Glu	Ala	Ala	Gln	Val	Leu
		275					280						285		
Ile	Val	Thr	Leu	Asp	His	Asp	Ser	Ala	Ser	Ser	Ala	Ser	Pro	Thr	Val
	290					295					300				
Asp	Gly	Thr	Thr	Thr	Gly	Thr	Ala	Met	Asp	Asp	Ala	Asp	Pro	Pro	Gly
305					310					315					320
Pro	Glu	Asn	Leu	Phe	Val	Asn	Tyr	Leu	Ser	Arg	Ile	His	Arg	Glu	Glu
				325					330						335
Asp	Phe	Gln	Phe	Ile	Leu	Lys	Gly	Ile	Ala	Arg	Leu	Leu	Ser	Asn	Pro
			340					345					350		
Leu	Leu	Gln	Thr	Tyr	Leu	Pro	Asn	Ser	Thr	Lys	Lys	Ile	Gln	Phe	His
		355					360						365		
Gln	Glu	Leu	Leu	Val	Leu	Phe	Trp	Lys	Leu	Cys	Asp	Phe	Asn	Lys	Lys
	370					375					380				
Phe	Leu	Phe	Phe	Val	Leu	Lys	Ser	Ser	Asp	Val	Leu	Asp	Ile	Leu	Val
385					390					395					400
Pro	Ile	Leu	Phe	Phe	Leu	Asn	Asp	Ala	Arg	Ala	Asp	Gln	Ser	Arg	Val
				405					410						415
Gly	Leu	Met	His	Ile	Gly	Val	Phe	Ile	Leu	Leu	Leu	Leu	Ser	Gly	Glu
			420				425						430		
Arg	Asn	Phe	Gly	Val	Arg	Leu	Asn	Lys	Pro	Tyr	Ser	Ile	Arg	Val	Pro
	435						440					445			
Met	Asp	Ile	Pro	Val	Phe	Thr	Gly	Thr	His	Ala	Asp	Leu	Leu	Ile	Val
	450					455					460				
Val	Phe	His	Lys	Ile	Ile	Thr	Ser	Gly	His	Gln	Arg	Leu	Gln	Pro	Leu
465					470					475					480
Phe	Asp	Cys	Leu	Leu	Thr	Ile	Val	Val	Asn	Val	Ser	Pro	Tyr	Leu	Lys
				485					490						495
Ser	Leu	Ser	Met	Val	Thr	Ala	Asn	Lys	Leu	Leu	His	Leu	Leu	Glu	Ala
			500					505					510		
Phe	Ser	Thr	Thr	Trp	Phe	Leu	Phe	Ser	Ala	Ala	Gln	Asn	His	His	Leu
	515						520					525			
Val	Phe	Phe	Leu	Leu	Glu	Val	Phe	Asn	Asn	Ile	Ile	Gln	Tyr	Gln	Phe
	530					535					540				
Asp	Gly	Asn	Ser	Asn	Leu	Val	Tyr	Ala	Ile	Ile	Arg	Lys	Arg	Ser	Ile
545					550					555					560
Phe	His	Gln	Leu	Ala	Asn	Leu	Pro	Thr	Asp	Pro	Pro	Thr	Ile	His	Lys
				565					570						575
Ala	Leu	Gln	Arg	Arg	Arg	Arg	Thr	Pro	Glu	Pro	Leu	Ser	Arg	Thr	Gly
			580					585					590		
Ser	Gln	Glu	Gly	Thr	Ser	Met	Glu	Gly	Ser	Arg	Pro	Ala	Ala	Pro	Ala
	595						600					605			
Glu	Pro	Gly	Thr	Leu	Lys	Thr	Ser	Leu	Val	Ala	Thr	Pro	Gly	Ile	Asp
	610					615						620			
Lys	Leu	Thr	Glu	Lys	Ser	Gln	Val	Ser	Glu	Asp	Gly	Thr	Leu	Arg	Ser
625					630					635					640
Leu	Glu	Pro	Glu	Pro	Gln	Gln	Ser	Leu	Glu	Asp	Gly	Ser	Pro	Ala	Lys
				645					650						655
Gly	Glu	Pro	Ser	Gln	Ala	Trp	Arg	Glu	Gln	Arg	Arg	Pro	Ser	Thr	Ser

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<210> 343
<211> 563
<212> DNA
<213> Homo sapiens
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<400> 343						
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ctgcagtaaa	agctggagga	atgagaatth	ccaaaaaaca	agaaattggc	accttgghaa	180
gacataccaa	aaaaacagga	ttcgagaaaa	caagtgcctt	tgcaaatgtt	gccaaaatac	240
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tctacattat	tcagcagcct	cgaaaatgtt	aagcctggat	ttaaaacaca	gccgtctggc	420
cagctgcctc	gaataattga	cagcttagca	aaaagggcc	aagctttcca	taggcgtgct	480
gcacttgctt	ggtaaattaa	gcagcttttg	tatcttcccc	tttgacttta	ggtaataaag	540
catccaaact	gttaaaaaaa	aaa				563

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<210> 344
<211> 107
<212> PRT
<213> Homo sapiens
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<400> 344
Met Ala Asn Glu Val Gln Asp Leu Leu Ser Pro Arg Lys Gly Gly His
 1          5          10          15
Pro Pro Ala Val Lys Ala Gly Gly Met Arg Ile Ser Lys Lys Gln Glu
 20          25          30
Ile Gly Thr Leu Glu Arg His Thr Lys Lys Thr Gly Phe Glu Lys Thr
 35          40          45
Ser Ala Ile Ala Asn Val Ala Lys Ile Gln Thr Leu Asp Ala Leu Asn
 50          55          60
Asp Ala Leu Glu Lys Leu Asn Tyr Lys Phe Pro Ala Thr Val His Met
 65          70          75          80
Ala His Gln Lys Pro Thr Pro Ala Leu Glu Lys Val Val Pro Leu Lys
 85          90          95
Arg Ile Tyr Ile Gln Gln Pro Arg Lys Cys
 100          105

```

355

<210> 345
 <211> 3733
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> misc_feature
 <222> (1)...(3733)
 <223> n = A,T,C or G

<400> 345
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 cagacacctc atagcaacct atttatacaa agggggaaag aaacacctga gcagaatgga 180
 atcattatct ttttcccaag gagaaaaccg gggtaaaggg aggggaagcaa ttcaatttgg 240
 agtccctgtg aatgggcttt cagaaggcaa ttaaagaaat ccactcagag aggacttggg 300
 gtgaaacttg ggtcctgttg ttttctgatt gtaagtggaa gcaggtcttg cacacgctgt 360
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 cccaggttct gctgcaagct tgaaggagcc tggagcggga gaaagctaac ttgaacatga 480
 cctgttgcat ttggcaagtt cttagcaacat gctcctaagg aagcgataca ggcacagacc 540
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 cagccctgaa gccaggtacc gcctggactt tggggaatcc caggattggg tactggaagc 720
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356

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taacttggat tgtctgtttg gccaaccatg aaaattaaag agtgtaagca gatgtaatgg 2880
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atttgggggt aag 3733

```

<210> 346

<211> 639

<212> PRT

<213> Homo sapiens

<400> 346

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          20          25          30
Leu His Pro Pro His His Thr Leu His Gln Thr Val Thr Ala Gln Ala
          35          40          45
Ser Lys His Ser Pro Glu Ala Arg Tyr Arg Leu Asp Phe Gly Glu Ser
          50          55          60
Gln Asp Trp Val Leu Glu Ala Glu Asp Glu Gly Glu Glu Tyr Ser Pro
65          70          75          80
Leu Glu Gly Leu Pro Phe Ile Ser Leu Arg Glu Asp Gln Leu Leu
          85          90          95
Val Ala Val Ala Leu Pro Gln Ala Arg Arg Asn Gln Ser Gln Gly Arg
          100          105          110
Arg Gly Gly Ser Tyr Arg Leu Ile Lys Gln Pro Arg Arg Gln Asp Lys
          115          120          125
Glu Ala Pro Lys Arg Asp Trp Gly Ala Asp Glu Asp Gly Glu Val Ser
130          135          140
Glu Glu Glu Glu Leu Thr Pro Phe Ser Leu Asp Pro Arg Gly Leu Gln
145          150          155          160
Glu Ala Leu Ser Ala Arg Ile Pro Leu Gln Arg Ala Leu Pro Glu Val
          165          170          175
Arg His Pro Leu Cys Leu Gln Gln His Pro Gln Asp Ser Leu Pro Thr
          180          185          190
Ala Ser Val Ile Leu Cys Phe His Asp Glu Ala Trp Ser Thr Leu Leu
          195          200          205
Arg Thr Val His Ser Ile Leu Asp Thr Val Pro Arg Ala Phe Leu Lys
210          215          220
Glu Ile Ile Leu Val Asp Asp Leu Ser Gln Gln Gly Gln Leu Lys Ser
225          230          235          240
Ala Leu Ser Glu Tyr Val Ala Arg Leu Glu Gly Val Lys Leu Leu Arg
          245          250          255
Ser Asn Lys Arg Leu Gly Ala Ile Arg Ala Arg Met Leu Gly Ala Thr
          260          265          270
Arg Ala Thr Gly Asp Val Leu Val Phe Met Asp Ala His Cys Glu Cys

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357

275	280	285
His Pro Gly Trp Leu Glu Pro	Leu Leu Ser Arg Ile	Ala Gly Asp Arg
290	295	300
Ser Arg Val Val Ser Pro Val	Ile Asp Val Ile Asp	Trp Lys Thr Phe
305	310	315
Gln Tyr Tyr Pro Ser Lys Asp	Leu Gln Arg Gly Val	Leu Asp Trp Lys
325	330	335
Leu Asp Phe His Trp Glu Pro	Leu Pro Glu His Val	Arg Lys Ala Leu
340	345	350
Gln Ser Pro Ile Ser Pro Ile	Arg Ser Pro Val Val	Pro Gly Glu Val
355	360	365
Val Ala Met Asp Arg His Tyr	Phe Gln Asn Thr Gly	Ala Tyr Asp Ser
370	375	380
Leu Met Ser Leu Arg Gly Gly	Glu Asn Leu Glu Leu	Ser Phe Lys Ala
385	390	395
Trp Leu Cys Gly Gly Ser Val	Glu Ile Leu Pro Cys	Ser Arg Val Gly
405	410	415
His Ile Tyr Gln Asn Gln Asp	Ser His Ser Pro Leu	Asp Gln Glu Ala
420	425	430
Thr Leu Arg Asn Arg Val Arg	Ile Ala Glu Thr Trp	Leu Gly Ser Phe
435	440	445
Lys Glu Thr Phe Tyr Lys His	Ser Pro Glu Ala Phe	Ser Leu Ser Lys
450	455	460
Ala Glu Lys Pro Asp Cys Met	Glu Arg Leu Gln Leu	Gln Arg Arg Leu
465	470	475
Gly Cys Arg Thr Phe His Trp	Phe Leu Ala Asn Val	Tyr Pro Glu Leu
485	490	495
Tyr Pro Ser Glu Pro Arg Pro	Ser Phe Ser Gly Lys	Leu His Asn Thr
500	505	510
Gly Leu Gly Leu Cys Ala Asp	Cys Gln Ala Glu Gly	Asp Ile Leu Gly
515	520	525
Cys Pro Met Val Leu Ala Pro	Cys Ser Asp Ser Arg	Gln Gln Gln Tyr
530	535	540
Leu Gln His Thr Ser Arg Lys	Glu Ile His Phe Gly	Ser Pro Gln His
545	550	555
Leu Cys Phe Ala Val Arg Gln	Glu Gln Val Ile Leu	Gln Asn Cys Thr
565	570	575
Glu Glu Gly Leu Ala Ile His	Gln Gln His Trp Asp	Phe Gln Glu Asn
580	585	590
Gly Met Ile Val His Ile Leu	Ser Gly Lys Cys Met	Glu Ala Val Val
595	600	605
Gln Glu Asn Asn Lys Asp Leu	Tyr Leu Arg Pro Cys	Asp Gly Lys Ala
610	615	620
Arg Gln Gln Trp Arg Phe Asp	Gln Ile Asn Ala Val	Asp Glu Arg
625	630	635

<210> 347

<211> 1891

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(1891)

<223> n = A,T,C or G

<400> 347

358

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cagaggcccg acagcagtggt ttgctgatca agtgatagtt ggcaatgcct ctttgccggt 420
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caaggggaat gctaaccttg agtataaaac tggagccctc agcatgccgg aagtgaatgt 540
ggactataat gccagctcag agacottgcg gtgtgaggct ccccgatggt tccccagcc 600
cacagtgggtc tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac 660
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nactgnattt nacatngttg tttnatagaa aanncntgat tttaganngt tncctgnatc 1800
nttcaagna gaatgnattw aaaatatacy attttccbaa aaaaaaaaaa aaaaaaaaaa 1860
maaagtacct cggccgcgac cacgctaagg g 1891

```

<210> 348

<211> 282

<212> PRT

<213> Homo sapiens

<400> 348

```

Met Ala Ser Leu Gly Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile Ile
 1           5           10          15
Ile Ile Leu Ala Gly Ala Ile Ala Leu Ile Ile Gly Phe Gly Ile Ser
          20          25          30
Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile
          35          40          45
Gly Glu Asp Gly Ile Leu Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu
          50          55          60
Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val
          65          70          75          80
His Glu Phe Lys Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met
          85          90          95
Phe Arg Gly Arg Thr Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn
          100         105         110
Ala Ser Leu Arg Leu Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr
          115         120         125
Lys Cys Tyr Ile Ile Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu
          130         135         140
Tyr Lys Thr Gly Ala Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn

```


359

145		150		155		160
Ala Ser Ser Glu Thr	Leu Arg Cys Glu	Ala Pro Arg Trp Phe	Pro Gln			
	165	170	175			
Pro Thr Val Val Trp	Ala Ser Gln Val	Asp Gln Gly Ala	Asn Phe Ser			
	180	185	190			
Glu Val Ser Asn Thr	Ser Phe Glu Leu	Asn Ser Glu Asn	Val Thr Met			
	195	200	205			
Lys Val Val Ser Val	Leu Tyr Asn Val	Thr Ile Asn Asn	Thr Tyr Ser			
	210	215	220			
Cys Met Ile Glu Asn	Asp Ile Ala Lys	Ala Thr Gly Asp	Ile Lys Val			
225	230	235	240			
Thr Glu Ser Glu Ile	Lys Arg Arg Ser	His Leu Gln Leu	Leu Asn Ser			
	245	250	255			
Lys Ala Ser Leu Cys	Val Ser Ser Phe	Phe Ala Ile Ser	Trp Ala Leu			
	260	265	270			
Leu Pro Leu Ser Pro	Tyr Leu Met Leu	Lys				
	275	280				

<210> 349

<211> 1517

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(1517)

<223> n = A,T,C or G

<400> 349

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gccccttagc cccgcceccc agctgccagt cccagcagc tcagtccctgc agtgagagtc 180
ttgggagtc atagctaagc accaggagct gagcactgcc cgctgtgect gcctgcaagt 240
ctgacatggc tcaggagaaa atggagctgg accttgagcc tgacacatct tatgggggaa 300
ccctgaggag atccagcagc gctccoctaa tccatgggct cagtgcacct tcacaggttt 360
tccaacctta cacacttaga actcggagga atagtacaac aattatgagc cgtcacagcc 420
tggaagaagg cctggatatg gtgaacagag aaactgcaca tgaaagggaa atgcaaacgg 480
caatgcagat aagccaatca tgggatgaga gcttgagcct gagtgcagct gattttgaca 540
agccggagaa attatattct cctaagagaa ttgacttcac tccagtttct ccagcacctt 600
caccacaccag gggattcggg aagatgttcg tgagcagcag tggattgcc acaagtccag 660
ttccagtc cagacgattt tcaagcagga gaagtcagag tccagtc aag tgcattagac 720
ccagtgttct tggctcctctt aaaagaaaag gtgaaatgga gacagaaagt cagcccaaga 780
gactcttcca aggcactacc aatatgttat ctccagatgc cgcgcaactg tctgatctca 840
gttcatgttc agatattttg gatggcagta gtagcagcag tggcttatcc tcagaccgcg 900
tggctaaaagg cagcgcctacc gcagagtctc cagtgcagct ctccaattca tgcctctcgt 960
tcatcttgat ggatgatctc tcacccaagt gacttaacca tttctgattc aacgttttaa 1020
ctgctgtttc ctacataaaa tgttttagtg ggaacgcaga gaactttgat ccataatgag 1080
gattaaagtt ttacagattt cacacattct gatgctatta ttactctttg gcattctctt 1140
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attttgattt tagtgattaa atctcaaatg ctgatttttt attgcttaga ggaatctttt 1260
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ctcttgcttg agagattttt ttttgctctc tgttgactac atagtttcaa atctctcttt 1440
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tcaagaccat tattttt 1517

```

<210> 350

360

<211> 243
 <212> PRT
 <213> Homo sapiens

<220>
 <221> VARIANT
 <222> (1)...(243)
 <223> Xaa = Any Amino Acid

<400> 350

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Met Ala Gln Glu Lys Met Glu Leu Asp Leu Glu Pro Asp Thr Ser Tyr
 1           5           10           15
Gly Gly Thr Leu Arg Arg Ser Ser Ser Ala Pro Leu Ile His Gly Leu
      20           25           30
Ser Asp Leu Ser Gln Val Phe Gln Pro Tyr Thr Leu Arg Thr Arg Arg
      35           40           45
Asn Ser Thr Thr Ile Met Ser Arg His Ser Leu Glu Glu Gly Leu Asp
      50           55           60
Met Val Asn Arg Glu Thr Ala His Glu Arg Glu Met Gln Thr Ala Met
      65           70           75           80
Gln Ile Ser Gln Ser Trp Asp Glu Ser Leu Ser Leu Ser Asp Ser Asp
      85           90           95
Phe Asp Lys Pro Glu Lys Leu Tyr Ser Pro Lys Arg Ile Asp Phe Thr
      100          105          110
Pro Val Ser Pro Ala Pro Ser Pro Thr Arg Gly Phe Gly Lys Met Phe
      115          120          125
Val Ser Ser Ser Gly Leu Pro Pro Ser Pro Val Pro Ser Pro Arg Arg
      130          135          140
Phe Ser Ser Arg Arg Ser Gln Ser Pro Val Lys Cys Ile Arg Pro Ser
      145          150          155          160
Val Leu Gly Pro Leu Lys Arg Lys Gly Glu Met Glu Thr Glu Ser Gln
      165          170          175
Pro Lys Arg Leu Phe Gln Gly Thr Thr Asn Met Leu Ser Pro Asp Ala
      180          185          190
Ala Gln Leu Ser Asp Leu Ser Ser Cys Ser Asp Ile Leu Asp Gly Ser
      195          200          205
Ser Ser Ser Ser Gly Leu Ser Ser Asp Pro Leu Ala Xaa Xaa Gln Arg
      210          215          220
Tyr Arg Arg Val Ser Ser Ser Met Leu Gln Phe Met Leu Phe Val His
      225          230          235          240
Leu Asp Gly

```

<210> 351
 <211> 248
 <212> PRT
 <213> Homo sapiens

<400> 351

```

Met Ala Gln Glu Lys Met Glu Leu Asp Leu Glu Pro Asp Thr Ser Tyr
 1           5           10           15
Gly Gly Thr Leu Arg Arg Ser Ser Ser Ala Pro Leu Ile His Gly Leu
      20           25           30
Ser Asp Leu Ser Gln Val Phe Gln Pro Tyr Thr Leu Arg Thr Arg Arg
      35           40           45
Asn Ser Thr Thr Ile Met Ser Arg His Ser Leu Glu Glu Gly Leu Asp
      50           55           60

```

361

Met Val Asn Arg Glu Thr Ala His Glu Arg Glu Met Gln Thr Ala Met
65 70 75 80
Gln Ile Ser Gln Ser Trp Asp Glu Ser Leu Ser Leu Ser Asp Ser Asp
85 90 95
Phe Asp Lys Pro Glu Lys Leu Tyr Ser Pro Lys Arg Ile Asp Phe Thr
100 105 110
Pro Val Ser Pro Ala Pro Ser Pro Thr Arg Gly Phe Gly Lys Met Phe
115 120 125
Val Ser Ser Ser Gly Leu Pro Pro Ser Pro Val Pro Ser Pro Arg Arg
130 135 140
Phe Ser Ser Arg Arg Ser Gln Ser Pro Val Lys Cys Ile Arg Pro Ser
145 150 155 160
Val Leu Gly Pro Leu Lys Arg Lys Gly Glu Met Glu Thr Glu Ser Gln
165 170 175
Pro Lys Arg Leu Phe Gln Gly Thr Thr Asn Met Leu Ser Pro Asp Ala
180 185 190
Ala Gln Leu Ser Asp Leu Ser Ser Cys Ser Asp Ile Leu Asp Gly Ser
195 200 205
Ser Ser Ser Ser Gly Leu Ser Ser Asp Pro Leu Ala Lys Gly Ser Ala
210 215 220
Thr Ala Glu Ser Pro Val Ala Cys Ser Asn Ser Cys Ser Ser Phe Ile
225 230 235 240
Leu Met Asp Asp Leu Ser Pro Lys
245

<210> 352

<211> 1529

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(1529)

<223> n = A,T,C or G

<400> 352

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gccccttagc ccccgccccc agctgccagt cccagcagc tcagtctctgc agtgagagtc 180
ttgggagtc atagctaagc accaggagct gagcactgcc cgctgtgcct gcctgcaagt 240
ctgacatggc tcaggagaaa atggagctgg accttgagcc tgacacatct tatgggggaa 300
ccctgaggag atccagcagc gctcccctaa tccatgggct cagtgcctt tcacaggttt 360
tccaacctta cacacttaga actcggagga atagtacaac aattatgagc cgtcacagcc 420
tggttaagtat agaagaagaa ggccctggata tggatgaacag agaaactgca catgaaaggg 480
aaatgcaaac ggcaatgcag ataagccaat catgggatga gagcttgagc ctgagtgaca 540
gtgattttga caagccggag aaattatatt ctctaagag aattgacttc actccagttt 600
ctccagcacc ttcacccacc aggggattcg gaaagatggt cgtgagcagc agtggattgc 660
caccaagtc agttcccagt ccaagacgat tttcaagcag gagaagtcag agtccagtc 720
agtgcattag acccagtggt cttgggtcctc ttaaaagaaa aggtgaaatg gagacagaaa 780
gtcagcccaa gagactcttc caaggcacta ccaatatggt atctccagat gccgcgcaac 840
tgtctgatct cagttcatgt tcagatatgt tggatggcag tagtagcagc agtggcttat 900
cctcagaccc gctggctaaa ggcagcgcta ccgcagagtc tccagtagca tgctccaatt 960
catgctcttc gttcatcttg atggatgata tctcacccaa gtgacttaac cttttctgat 1020
tcaacgtttt aactgctggt tcctacataa aatgttttagt ggggaacgca gagaactttg 1080
atccataatg aggattaaag ttttacagat ttcacacatt ctgatgctat tattactctt 1140
tggcatctot cttctccaaa gtccaatttt gtgagcctag tgaccttact agtatctggt 1200
tttgcgtgac tcatttttga tttagtgtat aaatctcaaa tgctgatttt tgattgctta 1260

362

gaggaatctt ttttcttagt gcctcaaaaa acacctattt tgagtctata catttaagaa 1320
 aggcaactgat gtgtattgcc tttaatgggt ccttttccgc agcaagtgat atgacagatt 1380
 tgatcagaaa ttctcttgct tgagagattt ttttttgtcc tctgttgact acatagtttc 1440
 aaatctctct ttatttcatg atgatataata aattgctttt aattatatna aattttattt 1500
 tctggatcag cttcaagacc attattttg 1529

<210> 353

<211> 252

<212> PRT

<213> Homo sapiens

<400> 353

Met	Ala	Gln	Glu	Lys	Met	Glu	Leu	Asp	Leu	Glu	Pro	Asp	Thr	Ser	Tyr
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Gly	Gly	Thr	Leu	Arg	Arg	Ser	Ser	Ser	Ala	Pro	Leu	Ile	His	Gly	Leu
		20						25					30		
Ser	Asp	Leu	Ser	Gln	Val	Phe	Gln	Pro	Tyr	Thr	Leu	Arg	Thr	Arg	Arg
	35						40					45			
Asn	Ser	Thr	Thr	Ile	Met	Ser	Arg	His	Ser	Leu	Val	Ser	Ile	Glu	Glu
	50				55					60					
Glu	Gly	Leu	Asp	Met	Val	Asn	Arg	Glu	Thr	Ala	His	Glu	Arg	Glu	Met
65				70					75					80	
Gln	Thr	Ala	Met	Gln	Ile	Ser	Gln	Ser	Trp	Asp	Glu	Ser	Leu	Ser	Leu
			85						90					95	
Ser	Asp	Ser	Asp	Phe	Asp	Lys	Pro	Glu	Lys	Leu	Tyr	Ser	Pro	Lys	Arg
	100							105					110		
Ile	Asp	Phe	Thr	Pro	Val	Ser	Pro	Ala	Pro	Ser	Pro	Thr	Arg	Gly	Phe
	115					120						125			
Gly	Lys	Met	Phe	Val	Ser	Ser	Ser	Gly	Leu	Pro	Pro	Ser	Pro	Val	Pro
	130					135				140					
Ser	Pro	Arg	Arg	Phe	Ser	Ser	Arg	Arg	Ser	Gln	Ser	Pro	Val	Lys	Cys
145				150						155				160	
Ile	Arg	Pro	Ser	Val	Leu	Gly	Pro	Leu	Lys	Arg	Lys	Gly	Glu	Met	Glu
			165					170						175	
Thr	Glu	Ser	Gln	Pro	Lys	Arg	Leu	Phe	Gln	Gly	Thr	Thr	Asn	Met	Leu
		180						185					190		
Ser	Pro	Asp	Ala	Ala	Gln	Leu	Ser	Asp	Leu	Ser	Ser	Cys	Ser	Asp	Ile
	195					200						205			
Leu	Asp	Gly	Ser	Ser	Ser	Ser	Ser	Gly	Leu	Ser	Ser	Asp	Pro	Leu	Ala
	210					215						220			
Lys	Gly	Ser	Ala	Thr	Ala	Glu	Ser	Pro	Val	Ala	Cys	Ser	Asn	Ser	Cys
225				230						235				240	
Ser	Ser	Phe	Ile	Leu	Met	Asp	Asp	Leu	Ser	Pro	Lys				
			245					250							

<210> 354

<211> 1574

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(1574)

<223> n = A,T,C or G

<400> 354

ttagggagtc gaccacgcg tccggcccg acgcggaaga actggcccag cggagggttc 60

363

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gcccccttagc ccccgccccc agctgccagt ccccgagcgc tcagtcctgc agtgagagtc 180
ttgggagtc atagctaagc accaggagct gagcaactgcc cgctgtgcct gcctgcaagt 240
ctgacatggc tcaggagaaa atggagctgg accttgagcc tgacacatct tatgggggaa 300
ccctgaggag atccagcagc gctcccctaa tccatgggct cagtgcctt tcacaggttt 360
tccaaacctta cacacttaga actcggagga atagtacaac aattatgagc cgtcacagcc 420
tgttgctgtc atcctcacct aatcgtattc ctagttagc actgcatcag atcaaaagg 480
aagaaggcct ggatatggtg aacagagaaa ctgcacatga aagggaatg caaacggcaa 540
tgcagataag ccaatcatgg gatgagagct tgagcctgag tgacagtgat tttgacaagc 600
cggagaaaatt atattctcct aagagaattg acttcaactcc agtttctcca gcaccttcac 660
ccaccagggg attcggaaag atgttcgtga gcagcagtg attgccacca agtccagttc 720
ccagtccaag acgattttca agcaggagaa gtcagagtc agtcaagtgc attagacca 780
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tcttccaagg cactaccaat atgttatctc cagatgccgc gcaactgtct gatctcagtt 900
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agaccattat ttg 1574

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<210> 355

<211> 267

<212> PRT

<213> Homo sapiens

<400> 355

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Met Ala Gln Glu Lys Met Glu Leu Asp Leu Glu Pro Asp Thr Ser Tyr
 1           5           10           15
Gly Gly Thr Leu Arg Arg Ser Ser Ser Ala Pro Leu Ile His Gly Leu
 20           25           30
Ser Asp Leu Ser Gln Val Phe Gln Pro Tyr Thr Leu Arg Thr Arg Arg
 35           40           45
Asn Ser Thr Thr Ile Met Ser Arg His Ser Leu Leu Leu Ser Ser Ser
 50           55           60
Pro Asn Arg Ile Pro Ser Arg Leu His Gln Ile Lys Arg Glu Glu
 65           70           75           80
Gly Leu Asp Met Val Asn Arg Glu Thr Ala His Glu Arg Glu Met Gln
 85           90           95
Thr Ala Met Gln Ile Ser Gln Ser Trp Asp Glu Ser Leu Ser Leu Ser
100           105           110
Asp Ser Asp Phe Asp Lys Pro Glu Lys Leu Tyr Ser Pro Lys Arg Ile
115           120           125
Asp Phe Thr Pro Val Ser Pro Ala Pro Ser Pro Thr Arg Gly Phe Gly
130           135           140
Lys Met Phe Val Ser Ser Ser Gly Leu Pro Pro Ser Pro Val Pro Ser
145           150           155           160
Pro Arg Arg Phe Ser Ser Arg Arg Ser Gln Ser Pro Val Lys Cys Ile
165           170           175
Arg Pro Ser Val Leu Gly Pro Leu Lys Arg Lys Gly Glu Met Glu Thr
180           185           190
Glu Ser Gln Pro Lys Arg Leu Phe Gln Gly Thr Thr Asn Met Leu Ser

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364

195	200	205
Pro Asp Ala Ala Gln Leu Ser Asp Leu Ser Ser Cys Ser Asp Ile Leu		
210	215	220
Asp Gly Ser Ser Ser Ser Ser Gly Leu Ser Ser Asp Pro Leu Ala Lys		
225	230	235
Gly Ser Ala Thr Ala Glu Ser Pro Val Ala Cys Ser Asn Ser Cys Ser		
245	250	255
Ser Phe Ile Leu Met Asp Asp Leu Ser Pro Lys		
260	265	

<210> 356

<211> 4458

<212> DNA

<213> Homo sapiens

<400> 356

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cagaccaacc ggctggcagc ccagctccgc tccgcccgc cctgcctcgg accctgcgcc 180
tgaggaagta tgcaggcaac cctctgccac ccgaagtctg tgggtcgctc ccagagggcg 240
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aaggcggcgc cgtgcctctg gcagctggac tgcactttgc cccgcgccgg cctcagctgc 480
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gacccgcccc gggcctgagc gcaggctgcc tccgggaccc cacggctgtc cggacgtgcc 600
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cacgtgaaga gtggtgaaag ggaacattga ttactgaagt gccctggaga gggaaagcac 720
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gccactgctt cctccacaaa cagctcttca taacatgggc tgcatgaaat caaagcaaac 840
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ggaacctcca gggaccaata ttgtgatctt ggaatatgca caccgcctgt ctcaggatat 1020
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cattgagagt gagggcctt gaggtgttag gatgacaaca ctttgactgt ggaggtgcta 1140
gtttgaataa atgtgacaaa agcaaaaact ggtgtgaaaa agtacaaata actatctgga 1200
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aacagaaaact tagtctgcaa ggtagaaagt ttcagtttta attctgtatt aagctttact 1920
atctcagagg tacagagggc tggaatatgg gcatttattt ccagtttttt cttgactagt 1980
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aatttgggag ggagaagaag aaattaagac atgacttggt agaaaattaa gacttcagtt 2340
tctagaatta tcttttcata aagatttggt agacattgag tttaaatgga aaggaaatta 2400
tttaagcctg tgtatgttag atccacaata caccattggt attgaaatat aaaggttaaa 2460

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365

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ccaagttaca taagcaagga aaacattatt tgaatatatgc catgttttcg ttgcctttgg 2640
acacctcatc attcaactct aattttaccg agtcccgga tttgtactgt cccattgtac 2700
ttgcaatcta caatttatat aatagaaaaa caaccaaacc cattcataca aggatctgaa 2760
gttataaggt taagggcaga aagtttccca taagtataaa acatttccag gtcatagaaga 2820
gtagtttagg ttgagtgaaca aaagcctagg tgtgggtgtt tttcattcat tttgcatctc 2880
acaccaagac atttttgtcg caaggtcatc tgcgtcttaa aatgtacaat taggtatata 2940
aaataagtac aatggtgaaa acacaaagcc aggtaaagca gcatgcccca cttaaattttt 3000
cagtatacat agggacagac aagtgtgttt tggtgtgtatc taaatatattt aatttcaggt 3060
tcctttctgtg ccctgggcca ctatttccca ggggtgtgac agagatgcct gccagatcca 3120
tatcaactag aagtctgatt totgttgctg cccttctcca gcaactatgg cagtatactt 3180
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<210> 357

<211> 127

<212> PRT

<213> Homo sapiens

<400> 357

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      20           25           30
Gly Pro Asp Gln Pro Ala Gly Ser Pro Ala Pro Leu Arg Pro Pro Leu
      35           40           45
Pro Arg Thr Leu Arg Leu Arg Lys Tyr Arg Gly Asn Pro Leu Pro Pro
      50           55           60
Glu Val Arg Gly Ser Leu Pro Glu Gly Ala Pro Trp Ser Arg Ala Pro
      65           70           75           80
Leu Gly Gly His Leu Glu Ala Arg Cys Gly Pro Arg Thr Arg Glu Glu
      85           90           95
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366

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 <211> 1168
 <212> DNA
 <213> Homo sapiens

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 <212> DNA
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<210> 360

<211> 583

<212> DNA

<213> Homo sapiens

<400> 360

368

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<210> 361

<211> 125

<212> PRT

<213> Homo sapiens

<400> 361

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20           25           30
Thr Gly Val Cys Pro Glu Leu Gln Ala Asp Gln Asn Cys Thr Gln Glu
35           40           45
Cys Val Ser Asp Ser Glu Cys Ala Asp Asn Leu Lys Cys Cys Ser Ala
50           55           60
Gly Cys Ala Thr Phe Cys Leu Leu Cys Pro Asn Asp Lys Glu Gly Ser
65           70           75           80
Cys Pro Gln Val Asn Ile Asn Phe Pro Gln Leu Gly Leu Cys Arg Asp
85           90           95
Gln Cys Gln Val Asp Thr Gln Cys Pro Gly Gln Met Lys Cys Cys Arg
100          105          110
Asn Gly Cys Gly Lys Val Ser Cys Val Thr Pro Asn Phe
115          120          125

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<210> 362

<211> 3310

<212> DNA

<213> Homo sapiens

<400> 362

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369

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<210> 363

<211> 732

<212> PRT

<213> Homo sapiens

<400> 363

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  20          25          30
Gln Ala Lys Lys Val Ile Thr Met Phe Val Gln Arg Gln Val Phe Ala
  35          40          45
Glu Asn Lys Asp Glu Ile Ala Leu Val Leu Phe Gly Thr Asp Gly Thr
  50          55          60
Asp Asn Pro Leu Ser Gly Gly Asp Gln Tyr Gln Asn Ile Thr Val His
  65          70          75          80
Arg His Leu Met Leu Pro Asp Phe Asp Leu Leu Glu Asp Ile Glu Ser
  85          90          95

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370

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 115 120 125
 Lys Arg His Ile Glu Ile Phe Thr Asp Leu Ser Ser Arg Phe Ser Lys
 130 135 140
 Ser Gln Leu Asp Ile Ile Ile His Ser Leu Lys Lys Cys Asp Ile Ser
 145 150 155 160
 Leu Gln Phe Phe Leu Pro Phe Ser Leu Gly Lys Glu Asp Gly Ser Gly
 165 170 175
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 180 185 190
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 Lys Met Val Met Ile Ser Leu Glu Gly Glu Asp Gly Leu Asp Glu Ile
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 545 550 555 560

371

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				565					570					575	
Ser	Val	Ser	Ser	Leu	Ala	Glu	Gly	Ser	Val	Thr	Ser	Val	Gly	Ser	Val
			580					585					590		
Asn	Pro	Ala	Glu	Asn	Phe	Arg	Val	Leu	Val	Lys	Gln	Lys	Lys	Ala	Ser
		595					600					605			
Phe	Glu	Glu	Ala	Ser	Asn	Gln	Leu	Ile	Asn	His	Ile	Glu	Gln	Phe	Leu
	610					615					620				
Asp	Thr	Asn	Glu	Thr	Pro	Tyr	Phe	Met	Lys	Ser	Ile	Asp	Cys	Ile	Arg
625					630					635					640
Ala	Phe	Arg	Glu	Glu	Ala	Ile	Lys	Phe	Ser	Glu	Glu	Gln	Arg	Phe	Asn
			645						650					655	
Asn	Phe	Leu	Lys	Ala	Leu	Gln	Glu	Lys	Val	Glu	Ile	Lys	Gln	Leu	Asn
			660					665					670		
His	Phe	Trp	Glu	Ile	Val	Val	Gln	Asp	Gly	Ile	Thr	Leu	Ile	Thr	Lys
		675					680					685			
Glu	Glu	Ala	Ser	Gly	Ser	Ser	Val	Thr	Ala	Glu	Glu	Ala	Lys	Lys	Phe
	690					695					700				
Leu	Ala	Pro	Lys	Asp	Lys	Pro	Ser	Gly	Asp	Thr	Ala	Ala	Val	Phe	Glu
705					710					715					720
Glu	Gly	Gly	Asp	Val	Asp	Asp	Leu	Leu	Asp	Met	Ile				
			725						730						